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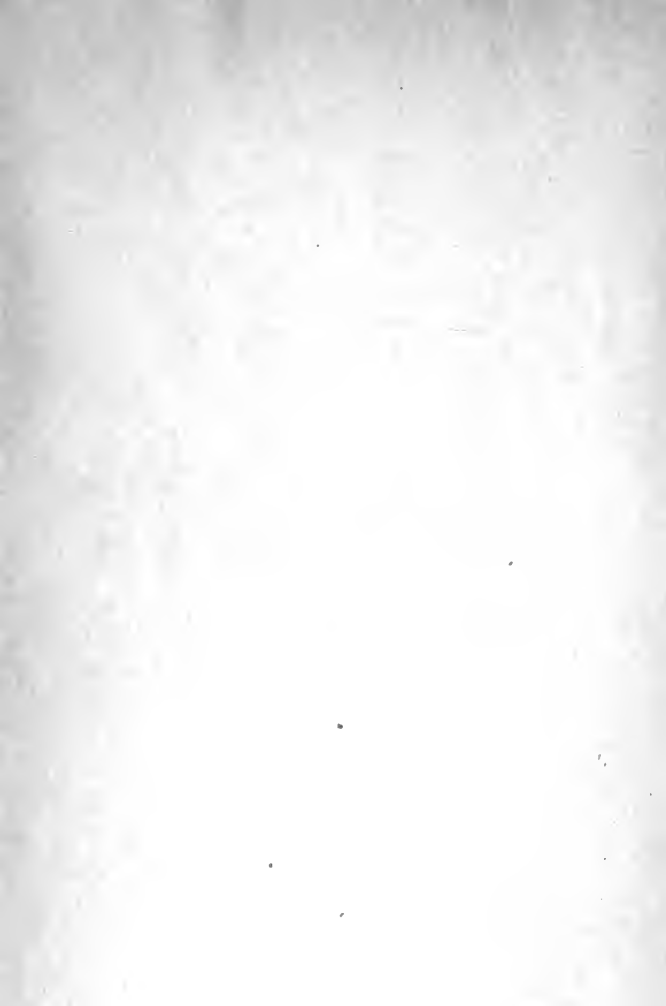
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NORTH CAROLINA
MEDICAL JOURNAL

EDITORS:
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GEO. GILLETTH THOMAS, M.D.

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ORIGINAL COMMUNICATIONS.

TREATMENT FOR DIPHTHERIA.

By J. R. CAMPBELL, M.D.

In the *Medical Record* for December 24th, 1887, Simon Baruch M.D., publishes a long and rather interesting article under the heading "Therapeutic Memorandum of Diphtheria, with Special Reference to the Value of Large Doses of Oil of Turpentine."

As indicated by the title, the object of the article is to draw attention to the value of oil of turpentine in large doses in the treatment of this dangerous disease. To the article, in the main, I have no criticism to offer, but the following paragraph calls to mind an experience which I shall offer for what it is worth. The paragraph is : "*Tr. ferri muriatis* is another remedy which I prescribe in all cases of diphtheria, not, however, in the small doses which I formerly used in combination with chlorate of potassium, but in doses from eight to twenty-five drops every hour, as we administer it so successfully in erysipelas. Only sufficient glycerine and water,

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are added to somewhat soften its astringent taste; the more concentrated the better the local effect. It is administered two hours after the calomel, and continued hourly or bi-hourly night and day. I would lay stress only upon one point, unimportant as it may seem: *food or stimulants may precede the iron, but should never follow it immediately.* Then a local effect is obtained, which is readily recognized in the shrivelling of the deposit and the reduction of the circumjacent lividity." A single reading of the whole article and an experience which I will relate, suggests the query whether the article itself might not have just as well been entitled "The Value of *Large Doses of Tr. Ferri Murialis* in the Treatment of Diphtheria."

As I relate my experience wholly from memory, it is entirely wanting in the minuteness of observation and accuracy of statement which alone gave value to experience, but as the treatment of diphtheria is still a subject for experiment, investigation and study, it may help to furnish a hint for the proper direction in which to look for a remedy.

During the spring and summer of 1885 scarlatina had been quite prevalent in and around Newton, N. C., and early in the fall of the same year was succeeded by a severe type of diphtheria. This epidemic was characterized by the involvement of the nares and the large and rapid infiltration of the soft parts of the throat and neck.

The first three cases, seen by Dr. McCorkle and myself, were quickly fatal. Immediately after the death of the third case, Dr. McCorkle asked me to see with him another case in the same neighborhood. This was a girl of about ten years—large, well grown, fat and ruddy—a typical red-cheeked country girl. She had been attacked two days previously, and the case had progressed with great rapidity. When we arrived, at about 2 p. m. on the third day of her illness, we found her propped up in bed, breathing with difficulty, her nose completely plugged up with the false membrane, while an occasional mass streaked with blood would be expelled. There was very great swelling of the soft parts of the throat, so much so that there was scarcely any depression between the chin and sternum. The swelling was very hard to the touch and prevented the mouth from opening to such an extent that a clear view of the inside was impossible, but we could see that the tonsils and uvula were all swollen and covered with a dirty-yellowish-white

false membrane, and so swollen that they seemed to fill the entire throat. The tongue was swollen, broad, and had a bloodless appearance. The skin was covered with a profuse perspiration. The bowels had failed to respond to several doses of purgative medicine. In appearance the child was much as we have seen in some cases of Bright's disease—a heavy, dull expression, with a swollen, sodden face; but the most striking thing was the great change which had been wrought in the blood. The red, robust child of three days ago, was as bloodless as a corpse. Her tongue, her lips, her hands, all presented the same bloodless appearance. While the ears were thick and white, the *tout ensemble* was the ghastly pallor of a corpse.

As we had exhausted the usual remedies in vain upon the previous cases, we were naturally somewhat discouraged, and I remarked to Dr. M. that it was quite useless to go on with the old routine, and calling his attention to the rapid deterioration of the blood, suggested that we try very large doses of some easily absorbed preparation of iron. His views coincided with mine, but as we were in the country our choice was limited to the contents of our respective medicine chests. We finally decided upon a preparation known as iron and alum mass, as I had seen evidences of its prompt action before. We made a *saturated solution* and ordered a tablespoonful to be given every three hours, and suspended all other treatment except whiskey, in the form of milk punch, which was given half an hour before each dose of iron.

The effect of this treatment was immediate and most gratifying, for upon my return next morning I found the child with a dry, red skin, a small *red* tongue and the swelling much reduced, in fact greatly improved. This improvement was maintained and she soon made a good recovery.

I will stop here to remark that a saturated solution of iron and alum mass contains about 25 grains to the ounce and is irritating almost to the point of being caustic. In cases where the nerves and tissues are blunted and relaxed by the poison of diphtheria it is borne in very large doses, but as soon as improvement is manifest, it must at once be very much reduced.

As this case was a typical one, I have attempted to give a fair picture of it. As no record was made of the thermometric and pulse observations, I have not mentioned them. I wish simply to direct attention to what at the time and afterwards seemed to me to

be the very great utility of large and concentrated doses of iron in a desperate case of diphtheria.

After this, in the same epidemic, Dr. M. and I treated some sixty cases of diphtheria with a loss of three patients—all from diphtheritic croup. Some were as bad, apparently, as the case above described. Since then I have had no opportunity to treat diphtheria. It is fair to say that Dr. M. afterwards used very large doses of tr. ferri muriatis, slightly protected by syrup, with equally good results. If I am not mistaken his prescription for the first twenty-four hours was—

℞.—Tr. ferri muriatis,
 Sympus simplex, āā parts..... ij.
 Aq. cinnamon, “ ii.

Of this he gave a tablespoonful every two hours, and a very large dose of iron with most excellent results.

I know how very imperfect is the above sketch. One may deny that it is even an argument in favor of large doses of iron, but it does show that very large doses—extremely large doses of iron—are borne without bad effects, and it may furnish some one a hint as to the direction in which to look for a remedy.

RESULTS OF SUPRAVAGINAL HYSTERECTOMY, WITH REMARKS ON THE OLD WAYS AND THE NEW OF TREATING UTERINE FIBROIDS.

By THOMAS KEITH, F.R.C.S.E., M.D., LL.D., Surgeon of Ovarian
 Diseases, Royal Infirmary, Edinburgh.

I have already published in detail every case of supravaginal hysterectomy performed by me till the end of 1884. The mortality was 7.9 per cent. I have also given every case in which I have in any way interfered with a uterine tumor by abdominal section. No one has done this but myself. With the exception of a case of very large solid tumor, probably uterine, in a girl of 16, operated on in hospital for Dr. Skene, of Brooklyn, the list of hysterectomies is carried down to date.

The mortality is greater than before, and it differs much in hospital and private work. In this series all patients operated on outside the hospital recovered; the fatal cases were all in the hospital. Of the whole series of sixty-four cases, twenty-six were private cases, with a single death (3.8 per cent.), and that patient died of acute mania. Of thirty-eight hospital patients, six died, or 15.7 per cent. In the private cases the tumors were larger; for private patients, being more able to take care of themselves, do not need interference so soon. They were also much more drained by hæmorrhages, and were altogether in a much less satisfactory and more anxious state than the majority of the hospital cases. I may here mention that, in ovariectomy, the same great difference obtains between private and hospital practice. In the first three years of hospital work, when everything was fresh and new, the mortality after all operations—not including spray cases—was under $2\frac{1}{2}$ per cent. Since then, that is, during the last three years, erysipelas was conveyed into the rooms, and has broken out three times. Pneumonia, which seems to be endemic, has appeared three times. The mortality has risen from under $2\frac{1}{2}$ to $5\frac{1}{2}$ per cent. It is but fair to say, however, that the number of severe and advanced cases of ovarian tumor continues, and that patients are, as a rule, not sent in an early stage, as they seem to be elsewhere. During more than these three years, a single death from diabetic coma, following a simple ovariectomy, which was rather advised against, sums up the whole mortality in private practice. All these operations were performed in crowded hotels, private houses, or ordinary lodgings.

Of the whole number of hysterectomies, five suffered from acute mania. When the attack followed quickly on the operation, the patients died; coming on later during the convalescence, recovery took place. A sixth, a young woman who was operated on at 19, was brought to me some years after, thin, morose and useless. Such a number of cases of mania following this operation cannot be an accidental circumstance.

The average time of convalescence in the extra-peritoneal cases was forty-one days; of the intra-peritoneal method, three weeks. There was no death either in hospital or private practice when the intra-peritoneal method was followed out, and I am satisfied that the best results in hysterectomy will be got by the ligature. Though a more surgical, this is a more difficult way, and much care is

needed in tying the vessels in the treacherous tissue with which we have to do. The principle of the extra-peritoneal treatment may seem to be the better, considering the amount of tissue that has to be left inside; but on this point experience has made me change my mind. We owe much to the extra-peritoneal or clamp method, for it was to the faithful carrying out of this principle by Sir Spencer Wells that ovariectomy was established as a legitimate operation; and though it did not at first give the best results, just as it is not now giving the best results in hysterectomy, this was mainly because in those days the means at our disposal were insufficient to disinfect the stump. These things are apt to be forgotten.

The tumors removed were smaller than before, and in all the fatal cases the operation was begun with the intention of removing the ovaries only. It was impossible to find them or to remove them sometimes, even after the tumor was turned out. In two, where omental adhesions were separated, and in another, where a rent in the substance had taken place on the tumor being got out of the pelvis, bleeding from the surfaces was such that there was no help for it but to go on. The proper practice where the ovaries cannot be entirely removed in cases of moderate-sized fibroids is to close the wound; for, though we may be warranted in advising a patient to run a small risk in getting the ovaries away, we are not justified in at once putting her into the risk of hysterectomy without her full consent. I regret much that I did not close the wound in Case 59, where the local conditions were not favorable for hysterectomy performed in a surgical hospital. Since then I have done no case of hysterectomy in the hospital; the only hospital case where interference was necessary was operated on in a lodging in August last. It was probably the most difficult operation I ever performed. The hæmorrhage from the bottom of the pelvis and side of the rectum was almost uncontrollable, and she nearly died on the table. Fortunately she was treated intra-peritoneally, and was going about in three weeks. A number of others have undergone, or are now undergoing, Dr. Apostoli's treatment. No one has suffered from the delay. Indeed, there is rarely any hurry in interfering with uterine fibroids by operation.

I say it deliberately, hysterectomy is an operation that has done more harm than good, and its mortality is out of all proportion to the benefits received by the few. What is the mortality of this

operation, now so often and so unnecessarily performed. We shall never know. I put it at 25 per cent., though it is probably much higher. I may be wrong; others can correct me by giving their total results. In other words, one out of every four women operated on by hysterectomy has till now died after an operation for the removal of a tumor that has, as a rule, a limited active existence, and that of itself rarely shortens life. We have no right to rush our patients into such a fearful risk, yet this is done every day. In abdominal surgery responsibility seems to have become old-fashioned and gone out of date.

When the whole stroma of the ovaries can be removed, the proceeding is so simple that it is scarcely worth calling it a surgical operation. Unfortunately, there are exceptions. When the ovaries are too close on the tumor, or when they are buried in the broad ligaments deep in the pelvis, or drawn behind the tumor, and cannot be satisfactorily removed, then failure is certain. The patient has the misery of the operation for nothing; the hæmorrhages and growth go on as before. In every case where the ovaries have been entirely removed, the cure has been perfect; cessation of growth and stoppage of menstruation have been the invariable results. In two cases of imperfect removal no good whatever followed; one of these has since, I may say, been perfectly cured by Apostoli's treatment; the other is now being treated in the same way. In two others, where the ovaries were removed, where part of a large sub-mucous fibroid was projecting into the vagina, enucleation had, after all, to be performed, with successful results. The ovaries might thus have been spared in these two cases, and one of the patients bitterly regrets every day her loss of them.

Enucleation has given me the smallest mortality of all the various methods for the relief of uterine fibroids. Indeed, on only two occasions has death followed this operation, and I have performed it a great many times. It is to my mind the most difficult of all operations on the uterus. In the first of the fatal cases, the mass, removed in pieces, weighed seven pounds; slight sloughing had begun after many previous attempts to remove the tumors before I saw her. There was hæmorrhage an hour after I left, and she died a week after of septicæmia. In the other, a patient sent by Dr. Cruickshank, the tumor enucleated was not larger than a child's head. She was perfectly well on the third day, when the antiseptic

plugging was removed, then died suddenly of septicæmia. I did not know till long after that she lay on a bed on which a patient had just died of pyæmia. The room had been papered afresh, and the carpet and mattress were new, but the blankets had not been washed. I mention these two deaths after enucleation, for the general impression seems to be that this is the most dangerous of all the methods for removing uterine tumors. I have not found it so. There is a secret in the doing of it, for it is not an obstetric operation that may be performed with all the apparent roughness of a craniotomy. It is a difficult and delicate surgical operation, requiring a thorough knowledge of scissor work, such as experience in vaginal plastic operations can give. Then it must be completed at one determined operation. If the os uteri be not open enough, it must be freely divided, and the parts afterwards united by suture. The most rigid antisepsis is essential. It requires greater care, greater patience and greater endurance than any operation I know.

Fortunately for those afflicted with uterine tumors, it now matters but little which of the old ways of operation is the best; whether the extra- or intra-peritoneal method be the better way of performing hysterectomy, or whether the convalescence lasts in the one case six weeks, or in the other twenty days, the treatment introduced by Dr. Apostoli must take precedence of all others. The success of this treatment is a great fact, and in saying that I accept *toto animo* his teachings, I do not speak without some experience of his practice. We have already—my son and I—in scarcely five months, applied electricity in strong, accurately measured doses upwards of 1,200 times, in considerably more than over a hundred patients, the majority in cases of uterine fibroids. The labor has not been small—indeed, it has been very hard—and it is not easy to get the science of the subject into an old head. On the other hand, it has opened out a delightful study, which increases in interest every day the deeper we get into it. When I came back from my holiday in the beginning of July, there were waiting for me several cases for hysterectomy or for the removal of the ovaries for bleeding fibroids, and there have been others since. These have all gone home without operation, with menstruation almost normal, and improving after their return, with the tumors in every case reduced in size, with pain gone, and with a freedom to walk about and enjoy life such as they were long strangers to. In one case only has there

been a return of hæmorrhage. The tumor had gone down two-thirds, she was apparently well, and, unwilling to detain her longer in town, she was allowed to go home too soon. All were more than pleased to have escaped the risks and miseries of a surgical operation that at once put their lives in peril. We—every one of us—consider far too lightly the misery that such operations cost our patients and their friends.

Should these improvements be permanent (and we have Dr. Apostoli's word for it that if the treatment be carried out long enough such is generally the case, and, so far, I am able to endorse almost every statement that he has made) it follows that the field for hysterectomy for the removal of ovaries for fibroids is narrowed down to the smallest limits. I have never been in favor of hysterectomy, simply because its death-rate is so high, and because it is performed for the removal of a tumor that rarely kills. So strongly do I now feel on this subject that I would consider myself guilty of a criminal act were I to advise any patient to run the risk of her life—and such a risk—before having given a fair trial to this treatment, even were I sure that the mortality would not be greater than that which hysterectomy has given me in my private cases—under 4 per cent.

RECORD OF TWENTY-SIX CASES OF HYSTERECTOMY.

In two cases the ovaries could not be removed, one died, one recovered; third case there were no adhesions, patient recovered; fourth and fifth cases, ovaries could not be removed, both recovered; sixth case, omental adhesions, recovered; seventh case, no adhesions—uterine cavity not opened, recovered; eighth case, omentum and colon adherent, recovered; ninth case, omental adhesions and to large intestines, recovered; tenth and eleventh cases, no adhesions, recovered; twelfth case, deaf and blind from anemia, died; thirteenth case, parietal and pelvic adhesions, recovered; fourteenth case, ovaries could not be got at (formerly insane), acute mania, died; fifteenth case, heart pushed upwards, frequent attacks of syncope, recovered; sixteenth case, broad ligament largely opened up, recovered; seventeenth and eighteenth cases, ovaries could not be removed, recovered; nineteenth case, broad ligament opened up, recovered; twentieth case, no adhesions, recovered; twenty-first case, ovaries could not be removed, died; twenty-second case, very

extensive omental and intestinal adhesions, recovered; twenty-third case, omental, cavity of the uterus occluded and distended by fluid, recovered; twenty-fourth case, very firm pelvic adhesions, recovered; twenty-fifth case, sacroma of the body of the uterus, recovered; twenty-sixth case, very firm pelvic adhesions, ovaries large and very adherent, recovered.—*British Medical Journal*.

LAPAROTOMY FOR LARGE MYOMA OF THE UTERUS— WOUND OF THE BLADDER—SLOUGHING OF PORTION OF OMENTUM—FORMATION OF UTERINE FISTULÆ BY THE SEPARATION OF THE PEDICLE—RECOVERY.

By R. A. KINLOCH, M.D., Professor of Surgery in the Medical College
of the State of South Carolina, Charleston, S. C.

Mrs. M. S., colored, aged 35, mother of three children, the last 12 years old, came to me from Port Royal, S. C., in August, to be relieved of an abdominal tumor, which she had first noticed two years ago, and which was now occasioning much discomfort from its weight and from its inducing protracted menstruation and interfering with the functions of the bladder and rectum. Her general health was good, although recently she had been losing. Examination, externally, revealed a solid symmetrical tumor, bosselated upon its surface, and, in size, approaching that of a pregnant uterus of six or seven months. Vaginal examination showed uterus partially retroverted, elevated, and moving with the tumor, with which it was intimately connected; cervix natural; length of cavity somewhat in excess. Diagnosis—myoma, or fibro-myoma, or fibro-cystic tumor of the uterus, intraparietal or sub-serous.

The patient and her friends were made aware of the risks of the operations of myomectomy and hysterectomy, and in my judgment one of these would be necessitated. Patient entreated that the operation should be done, and she returned home with the understanding that she would report again after two weeks.

August 31, 1887—Operation of laparotomy and myomectomy at 12 M. Antiseptic precautions were carefully observed throughout operation. A solution of hydrate bichloride (1-10,000) was used for

washing out the cavity. Incision carried from two inches above the pubes to one inch above the umbilicus. Upon opening cavity tumor presented as an immense bosselated mass, firm but elastic to the touch, with here and there a soft spot. At its upper portion the diameter was some six or eight inches. After springing it through the abdominal wound it appeared rather pear-shaped, with the lower or pediculated end—if this could be so called—having a diameter of about two inches. Subsequently its weight was estimated at fourteen pounds. At first sight it much resembled a pregnant uterus, but the bosselated appearance and the absence of the uterine appendages were sufficiently significant. The growth was almost surrounded by a closely adherent omentum, which explained at once the net-work of large swollen veins overlying its surface.

The next step of the operation was to carefully separate the omentum, by tearing through adhesions where this was practical, and by dividing more vascular portions of the structure between pairs of silk ligatures, leaving some portions attached to the tumor. The smooth and bosselated appearance of the tumor, down even to the narrow portion now occupying the lower angle of the abdominal wound, gave the impression that it was entirely isolated, except at its point of origin from the uterine tissue. Therefore no proper investigation to prove its disconnection with the bladder was instituted, although I had provided a female catheter for this very purpose. The result proved, as will be shown, that I committed a great error. A rubber ligature was now thrown around the smallest portion, after the growth had been fully elevated. But having some doubt as to the contractile power of the rubber cord, I afterwards put around the pedicle the chain of an *écraseur*, and tightened this sufficiently to control the circulation going to the tumor. Next I transfixed the portion just above the chain with two of my long steel needles, having removable guards, passing them at right angles to each other. Finally, I removed the mass by piece-meal amputation down to near the point traversed by the needles. This was to enable me to watch the disposition to hemorrhage and to allow the thick pedicle time to shrink by slowly yielding up its liquid contents. When I had nearly completed the removal of the growth, I suddenly perceived that the last stroke of the knife had opened the cavity upon the anterior face of the tumor near to the position of the needles. Careful inspection of the parts and the passage of a catheter convinced me that I had wounded the bladder. My

over-confidence had brought about a serious accident. Avoiding the bladder, the remaining portion of the tumor was trimmed off to a point sufficiently near to the transfixing needles. The pedicle below the needles was transfixed with a double ligature of braided silk and this securely tied. Upon releasing the parts encircled by the chain of the *écraseur*, there was an active hemorrhage from the wall of the bladder where this had been wounded near the fundus. Several vessels had to be secured with fine silk. The wound in the bladder was carefully closed by a continuous suture of fine catgut passed through the muscular coat, and by subsequently bringing together the peritoneal coat over this by the continuous Lembert silk suture. A soft rubber catheter was introduced into the bladder and retained. A glass drainage-tube was passed into the abdominal cavity; the abdominal wound was closed by deep and superficial silk sutures; the pedicle was painted with a solution of the perchloride of iron, and the whole wound dressed with iodoform and cotton.

I will not weary your readers with the daily clinical record. Suffice it to say that the bladder-wound healed promptly and gave no trouble. After five days the retained catheter was dispensed with and the urine was passed naturally. Patient's general condition was good throughout. On the second day she was anxious to eat and murmured at the scanty diet prescribed. The bowels were moved by a saline aperient on the third day. The temperature, morning and evening, ranged below 100° during the treatment, but at midday on the 7th, 14th and 17th days it reached 102°. On the third day the drainage-tube was dispensed with, and on the ninth day the deep sutures of the steel needles were removed. The silk ligature of the pedicle was allowed to remain. The needles were annoying from pressure upon the abdomen, and hence, as the result showed, were removed earlier than they should have been. Two days after their removal the pedicle, with the attached silk ligature, was dragged towards, or into, the cavity to such an extent as to completely invest the abdominal parietes, so that there now existed a deep funnel-like pouch, in which the pedicle was entirely concealed; the ends of the silk ligature protruded from this opening. The pedicle, however, remained entirely shut off from the general cavity. The discharge from this pouch soon became so profuse and offensive that it was necessary to wash it away twice daily by means of a syringe and an antiseptic solution, and then to fill up the small *cul-de-sac* with iodoform. After another week the pedicle had sloughed

away piece-meal, and the silk ligature had been detached and removed. Syringing with carbolized water was continued up to the 14th day, when there was noticed much purulent discharge from one of the suture holes near to where the drainage-tube had passed. Patient was now more restless, lost appetite and complained of pain in the abdominal parietes contiguous to lower portion of wound. Examination with a probe revealed a serious running deeply, and off to the right side. This was syringed out, and my determination was to open up the parietal structures the next day to meet the exigencies of the symptoms. This was fortunately not necessary, for the next day a dark slough presented at the abdominal opening where the drainage-tube had passed. Upon seizing this with the dressing forceps, it was easily extracted, and proved to be a piece of omentum two inches long, with a silk ligature attached. Rapid improvement followed the fortunate exit of this dead tissue, and the wound gave no further trouble. I infer that in separating adhesions I must have injured the vascular supply to this portion of omentum.

On the 7th of October, 37 days after the operation, when patient was arranging for her return home, I was informed that after syringing out the pouch, before described as formed by the retreat inwards of the pedicle; the fluid used had in part passed out of the vaginal orifice. An examination verified this report, and proved that the sloughing away of the pedicle had opened the uterine cavity near the left corner to which the tumor had been attached, and thus established a fistula which connected the uterine cavity and the vagina with the opening in the abdominal parietes. With the Sims speculum in position, the fluid injected into the parietal pouch could be seen escaping from the os uteri into the vagina. The sound passed into the uterine cavity showed that this was of nearly normal dimensions. A few days after this, patient returned home in good health, but with the uterine fistula still allowing the passage of a little fluid whenever this was injected.

PROF. REMINGTON says that the best vehicle for menthol for outward application is oleic acid, half an ounce of which will dissolve 200 grains of menthol in a test-tube with the aid of heat.—*Am. Druggist.*

SELECTED PAPERS.

ARSENIC CANCER.

Arsenic Cancer.—At a recent meeting of the Pathological Society of London, Mr. Jonathan Hutchinson, F.R.S., desired to make the proposition that the internal administration of arsenic in large doses over long periods might produce a form of cancer which was of the epithelial variety, but presented certain peculiarities. He showed a drawing of the foot of a gentleman who had taken arsenic for psoriasis for many years; a corn on the sole of the foot ulcerated, and at first had the appearance of perforating ulcer. Perfect immobility was not followed by any improvement. The palms of the hands also became affected, small corns developing. The growth in the foot was excised, and the patient recovered. The patient was now under the care of Prof. Chiene; the microscopical examination was inconclusive. He also showed drawings of the hands of an American physician who had taken arsenic for long periods in considerable doses. A rough condition of the palms and soles developed though the psoriasis was cured. These early growths in these cases, he observed parenthetically, were corns, not warts, and the growths were never papillary. This patient then got on the front of the wrist of the left hand a growth in the subcutaneous tissue, the other hand also became affected; the growths perforated the skin and fungated; they had the appearance of a syphilitic lesion, but the patient never had that disease. The growths were scraped away and also excised; microscopical examination was again at first conclusive, but the opinion finally leaned to the view that the disease was cancer. The patient then came to Europe, and in deference to the opinion of several surgeons, antisyphilitic remedies were fairly tried, but gave no result. Both hands were amputated; the patient died eighteen months later. Nodules of epithelial cancer were found in the axillary glands on the left side, in both lungs, in the supra-renal capsules, in a rib and in other parts. He also showed drawings from another case of a lesion of the palms, exactly resembling the corns seen in the other cases. This patient had a cancerous growth in his neck, and took arsenic in large doses,

for months together; the skin became muddy and thick, and patches like psoriasis developed upon the elbows and other parts, but in the palms and soles the corny masses formed, but were not followed by cancer. About five years ago Dr. Clifford Allbutt had given him the particulars of a case of a young lady who had taken arsenic for pemphigus for many years with occasional intermissions. An ulcer had developed on the crest of the ilium, the glands enlarged, a tumor formed in the thigh, and the patient died at the age of 25, owing to the enlargement of these growths. Mr. Hutchinson also mentioned a case which had been under the care of Mr. Waren Tay and himself. The patient was a clerk, aged 34, who had taken arsenic for a long time for psoriasis. The palms of his hands and soles of his feet were speckled over with corns when he applied at the Skin Hospital; finally, epithelial cancer of the scrotum appeared, and was excised; the patient was then lost sight of. He thought the facts he had brought forward warranted him in advancing the theory that the cancer in these cases was due to arsenic with the hope that attention might thus be more generally directed to the point. Dr. Edmunds had seen enormous doses of arsenic (drachm doses of Fowler's solution) taken as a prophylactic against ague in the Fens, but had never seen epithelial cancer produced. That disease was not common in the Fens, whereas in the neighboring county of Norfolk, where ague did not exist, and where presumably arsenic was not taken, cancer was very common. In reply to a question, Mr. Hutchinson said that in the American case no arsenic had been taken for some time before the amputations. Dr. W. B. Hadden inquired as to the relation of arsenic to skin disease in general, and mentioned that he had seen several cases of erythematous eruptions in children with chorea taking arsenic. Mr. Harrison Cripps thought Mr. Hutchinson ought to bring forward further evidence. In the first case there was, so far as could be gathered, no evidence, clinical or microscopical, that the disease was epithelial cancer. In other cases the chronic psoriasis might have acted as a chronic irritation, and have thus produced the cancer. Mr. Makins suggested that inquiry ought to be directed to ascertain whether the arsenic-eaters of Styria developed this form of cancer. Mr. Eve believed that epithelial cancer of the palms always presented peculiar appearances which agreed with those described by Mr. Hutchinson, and added that lymphosarcoma of the lungs occurred with

considerable frequency in workers in cobalt mines, a fact which he thought lent support to Mr. Hutchinson's theory. The President had seldom heard an argument founded on clinical and pathological evidence more definitely suggesting the conclusion advanced. In this connection it must be remembered that chronic psoriasis was sometimes followed by cancer. In face of the facts advanced by Mr. Hutchinson, it could not, he felt, be doubted that arsenic had a power in persons predisposed to it to determine the development of cancer. The first two cases he had seen himself, and he had been clearly of opinion that the disease was cancerous. Mr. Hutchinson, in reply, said that he had omitted to state that Dr. White, Professor of Dermatology in Harvard University, had already published the second case, and had advanced the opinion that the psoriasis produced warts, and the warts the cancer. But there were no warts, and the cancer developed not on the sites occupied by the psoriasis, but in the palms of the hand, which were quite free from disease. Microscopical evidence in the early stages of cancer was often conflicting and misleading. For instance, in this American case many most competent pathologists, both in England and on the Continent, had, after examining the microscopical specimens, formed the opinion that the growths were not cancerous, yet the patient undoubtedly had cancer, and died of it. He believed that herpes zoster was certainly produced by arsenic; arsenic eczema had already been described. A remarkable fact about arsenic eruptions was that they were never symmetrical.—*British Medical Journal*.

CATARRHAL VULVO-VAGINITIS IN CHILDREN.

By THEOPHILUS PARVIN, M.D., Professor of Obstetrics, Diseases of Women and of Children, Jefferson Medical College, Pa.

Within two weeks there have been presented at the dispensary for diseases of children of Jefferson Medical College Hospital, three girls, the oldest seven years of age, suffering with leucorrhœa. It may therefore be stated that the disease is not uncommon; and possibly a brief consideration of its causes, character and treatment will prove of some value to the general practitioner.

The subjects may be infants at the breast, or older children. It is not restricted to the poor, but may affect the offspring of the rich, or those in comparatively easy circumstances.

In some the origin of the flow is simply a catarrhal inflammation of the vulva, but more frequently the vagina is also affected, either primarily or secondarily, and therefore the name given as the title of this paper is preferred. The extent to which the vagina is involved could only be ascertained by the use of a speculum, or of retractors; but such examination is impossible in many cases, scarcely advisable in any, and, if it be required, a Skene's urethral speculum may be employed in some cases. It will frequently be found that the subjects of this affection are not robust, even though there may be no obvious constitutional taint; in many instances they are pale and thin, and there may be elicited by inquiry a history of enlarged cervical glands, or of catarrhal affections or other mucous surfaces than of those now involved.

Probably the mother's attention will be first directed to the disease by finding muco-purulent stains upon the child's underclothing; or, if it be an infant, by observing similar stains upon the diapers, or upon giving the infant its daily bath, the flow may be seen at the vulvar orifice. The child, if old enough to tell its suffering, complains of itching and burning at the vulva; to relieve the former, rubbing the external organs of generation will be employed, a practice which may be the beginning of abominable, injurious and obstinate self-abuse. The inflammation may extend from the nymphæ and the inner surfaces of the greater lips to the external surface, and even to the substance of the greater lips, which then become very much swollen. In some cases, rare, however, an eczematous eruption appears upon the external face of each greater lip, and even extends to the adjacent skin as far as the groins and the upper parts of the thighs. But more frequently a visual examination will show simple excoriation of the parts, and small reddened surfaces upon the vulvar and vaginal entrance. The first condition results from scratching, and the second, possibly, from the irritant discharge, causing a superficial epithelial desquamation. There will also be seen coming from the vulvar orifice a fluid varying in color from a milk-white to yellow, or even greenish, in consistence from an almost watery character, to the density of thick pus, and in quantity from a few drops to one or two teaspoonfuls, or even more.

Among the commonly alleged causes of the affection is want of cleanliness. But I am sure that in one of the three cases to which reference has been made, there was no such neglect. Self abuse is also stated to be a cause; and I have recently met with an instance of this kind—the vile practice having been taught a child of eight years, and which no remonstrance and no punishment could prevent; even when her hands were tied she would gratify the shameless passion with her heel. But let us be charitable, and careful not to attribute in all cases the vulvo-vaginal inflammation if associated with self-abuse to the latter; for in most cases the relationship ought to be reversed, the onanism being the consequence of the former.

Foreign bodies may be accidentally, spontaneously or purposely introduced into the vagina. Ascarides, for example, passing out of the rectum, may enter the vagina. One of the most remarkable instances of a foreign body having caused a vulvo-vaginitis has recently been reported in the *Annales de Gynécologie et d' Obstetrique*, by Prof. Rouvier of the Faculty of Medicine, Beirut, Syria. The patient was a girl, seven years old, who had been for sometime addicted to onanism, which is very common in Syria. Seven months before the doctor was consulted this girl was amusing herself with a companion of her age, and this companion, in a sudden freak, put the part of the shell of a hazle-nut in her vagina. Injuries to the hymen, as in attempted rape, may give rise to the disease. It may have its origin in exposure to cold, if there should be a predisposition to affections of mucous surfaces. All are familiar with the story of an eminent practitioner who found disease of mucous membranes prevalent over others, and regarded the human being as simply a mucous membrane; when he retired from professional work, he remarked, "I have taken my last fee from a mucous membrane." Without being misled by the exaggeration, we all recognize the fact that some individuals are predisposed to mucous fluxes, and let a girl, whether baby or child, have her external genital organs exposed to the action of damp cold, inflammation of the vulvo-vaginal canal, or of a part thereof, may result.

The duration of the disease varies in different subjects, but in general a longer time is required to cure it in a child than in an adult. More frequently, too, in the former constitutional treatment is necessary.

Of course, if it is known that there is a foreign body in the

vagina, the first thing in the treatment is its removal. Whether, as asserted by some, thread-worms in the rectum, the worms not passing into the vagina, may cause the disease, is doubtful; but certainly they will aggravate it, and therefore should be gotten rid of by methods too familiar to the profession to need being stated. Another aggravating cause of the disorder is constipation, and of course this should be corrected. Warm hip-baths weakly impregnated with tar-soap, or containing two per cent. of carbolic acid, should be used once or twice daily. If the labia are much swelled, a piece of lint dipped in lead water may be interposed. Should these present raw surfaces, dusting them with iodoform will be useful. Injections of an astringent or alterative character will be required in many cases; one of the simplest of these is borax dissolved in water, three or four grains to the ounce. Corrosive sublimate, or nitrate of silver, will often prove very useful—the one used in the proportion of 1 to 3000; the other, three grains to the ounce of distilled water: the objection to the one is possible accidental poisoning, and to the other the fact of its staining garments or bed-clothing with which it may come in contact. Whatever material be the basis of the injection, the latter should be preceded by thorough washing out of the vagina with warm water; and the injection, too, must be warm. There is in some cases a struggle to get these little ones to submit to an injection, but the struggle will be more difficult for the mother or nurse if the attempt is made to inject a cold liquid into the vagina. The child should be lying upon the back, with the hips somewhat elevated, so that the injected fluid may come in contact with the entire vaginal wall, and so that it may be retained for a time. If weakness of action on the part of the mother, combined with wilfulness on the part of the child, prevent or render incomplete the vaginal injections, a partial substitute may be found in free bathing of the vulva with a warm solution of borax. Let the child be recumbent, the hips elevated, and the nurse or mother separating the labia, squeeze into the opened vulva a stream of the solution, from a sponge saturated with it. But I wish in these cases especially to commend the iodoform pencils first suggested by Pott. A vaginal suppository is made with iodoform, three to six grains, and cocoa butter. It should be about the thickness of an ordinary lead-pencil, and introduced into the vagina, one or two being used in the twenty-four hours. Of course, the child must

remain lying down for a time after its introduction. In some cases in which injections failed, or were imperfectly used, or could not be employed from the indocility of the child, and the unwillingness of the mother to compel obedience, the results from the suppositories mentioned have been quite satisfactory.

In many cases the administration of a tonic, such as iron, is indicated, and in some cod-liver oil, and in others one of the preparations of arsenic.—*Medical and Surgical Reporter*.

WOUNDS—THEIR ASEPTIC AND ANTISEPTIC MANAGEMENT.

By DAVID PRINCE, M.D., Jacksonville, Ill.

(A Paper Prepared for the Meeting of the American Surgical Association, 1887.)

I. *Aseptic*.—*a*. By diminishing the amount of floating material in the air by means of filtration through cotton, for wounds in the process of formation.

b. By personal cleanliness.

c. By the subsequent seclusion of the floating material by investments that are proof against penetration by the dust floating in the air.

II. *Antiseptic*.—By the employment of agents which are unfriendly or destructive to minute organic life, in such dilution as not to be injurious to the wound itself.

a. The spray.

b. The dry antiseptic dressing.

c. The wet antiseptic dressing.

d. Drainage.

e. Temperature.

f. Shock.

The importance of eliminating the greatest possible proportion of the atmospheric dust cannot be over-estimated. The microscopist expects that some of his cultures will be contaminated by the accidental planting of germs from the air, in the course of exposure of

the culture mediums, in the process of transfer of material from one receptacle to another.

For surgical purposes, it is important that all wounds made by the surgeon shall be alike protected from atmospheric implantation. The surgeon cannot afford to be as unsuccessful with his wounds as the bacteriologist with his culture mediums. The contamination of a wound implies complications which may thwart the object of a surgical operation and endanger the life of the patient. The complete sterilization of a wound is a desideratum which is certainly possible to secure, and it is in the scope of the present endeavor to secure some advancement in this direction.

The wounds most difficult to protect from suppurative and putrefactive complications are those of the serous cavities.

The condition of the internal parts after a laparotomy are like those of a sterilized material infected to some extent.

The reason why all cases do not manifest the phenomena of decomposition, with the local abscesses and the general blood infection incident to decomposition is, that in some cases the local vital forces are sufficient to produce an exudate that walls in, digests and destroys the invaders, while in other cases the relative force is insufficient, and the invaders wage a successful war and secure a focus of decomposition.

Fluid left in the peritoneal cavity, blood-clots, portions of a tumor left unavoidably attached, and the material of sutures and ligatures are in the condition of a prize, to be won by one party or the other.

The sutures and ligatures can be chemically treated by sublimate or other antiseptic, so as to resist attack by either attack for a brief period, but the blood-clot, lifeless portions of a tumor, serum and other exudates, are ready to be attacked by the leucocytes exuded from the blood, on the one hand, or, on the other hand, by the germs introduced in connection with the air.

There are two precautions: One is to leave as little non-vital material in the wound or in the abdomen as is possible without injurious rough manipulation of the peritoneal surfaces, and the other is to permit the introduction of as few of the invaders as possible. It may be assumed to be impracticable to secure complete exclusion of either class of material favoring decomposition, the invading germs and the lifeless food for their growth and multiplication.

The question is of the methods and details which will reduce both

classes of agents to the smallest amount, and secure the greatest immunity for the greatest number of patients.

I. *a.* It is not necessary to the presentation of this subject to go over the proof of the proposition that the bad behavior of wounds depends in part upon the particulate material floating in the air. That the agents of sepsis are not gaseous, but particulate, is proved by the preservation of a great variety of substances when put into open vessels plugged with cotton, under such circumstances as to preclude the presence of these agents at the beginning of the observation. The ordinary method of sealing test tubes by means of cotton is a sufficient illustration.

The present status of opinion is well shown in a series of papers in the *American Journal of the Medical Sciences*, by W. Watson Cheyne, of London. In the number for January, 1887, p. 101, the microbes entering a wound are classed as

1. Non-parasitic: those which are harmless, though introduced in large quantities.
2. Parasitic: those which require to be introduced in considerable quantity to do any mischief.
3. Pathogenic: those which can live and multiply in the system, if only one microbe be introduced.

"When bacteria are introduced, there follows a struggle for existence between them and the cellular elements. Leucocytes quickly accumulate in the neighborhood of the mass of bacteria, followed by a fight for the mastery between the invaders and the invaded. The cells take up the bacteria into their interior, where they are destroyed and removed, if non-pathogenic. When, however, the bacteria are virulent, the cells are themselves destroyed, undergoing degeneration, while the bacteria multiply, living upon the tissues which they decompose."

Cheyne discusses the question of the elimination of microbes, and thinks that those which are not destroyed and decomposed in the system, get out chiefly through the kidneys.

In the same direction is this quotation from Klein (*Micro-organisms and Disease*), p. 167:

"Amongst the legion of different species of micrococci and bacilli floating in putrid substances, the great majority are quite harmless; when introduced into the body of an animal they are

unable to grow and multiply, and therefore are unable to produce any disturbance.

"But some few species there are which, although ordinarily growing and thriving in putrid substances, possess this power, that when introduced into the body of a living animal, they set up there a specific disease."

In the same direction is a statement from Staheli, of Bale (in the *Revue de Chirurgie* for August, 1886, p. 688):

"Fifty-nine wounds were dressed with oxide of zinc, of which forty-seven united by the first intention, and in fifteen of these cases micro-organism were found. In the cases of union, notwithstanding the presence of micro-organism, these are called inoffensive marauders, such by their nature or by their quantity.

"It is well known that the question of a simple abscess or of a septicæmia depends upon the quantity of microbes injected."

His principal conclusions are :

1. Under a dressing of oxide of zinc wounds can be put beyond the reach of micro-organisms.

2. In general, the micro-organism found in the secretions existed there already at the time of the operation.

3. Union by the first intention is most generally prevented by the presence of the staphylococcus pyogenes, s. p. aureus and s. p. albus.

4. The wound secretions are good culture mediums.

These microbes go in class second of Klein.

This classification is further extended by Rosenbach quoted in *Micro-organisms, in Diseases*, New Sydenham Society, 1886, p. 415 :

1. Staphylococcus pyogenes aureus.

2. " " albus.

3. " " citreus.

[*Knapp adds :

4. Micrococcus tenuis.]

5. Streptococcus pyogenes.

This last is similar to the micrococcus of the erysipelas. It has special characteristics corresponding with Ogston's observation of the different modes of invasion of the staphylococcus and the streptococcus.

"The latter can penetrate into the living tissue, grow through it and live on it for a considerable time before suppuration occurs and

*New York Medical Record, December 25th, 1886, p. 702.

the tissue breaks down. The same is true of the micrococcus of erysipelas. These two are supposed to act together, adding the suppurative element to that of erysipelas."

The last would arrange themselves in the class of pathogenic microbes of Klein.

Dr. Harold C. Ernst, in a report in the transactions of this Society for the last year, makes thirteen pus-producing microbes.

A Sterilized Atmosphere.—To render the air aseptic, it may be kept still as in a closed box, or it may be strained through something which will hold the floating particles, or it may be carried for a considerable distance along some plane surface lined with glycerine or other substance to which the particles will stick.

The settling process is inapplicable for surgical purposes, because, however perfectly the floating material may have settled to the floor, the use of a room must disturb the air and bring a portion of the dust up again to float as before, and besides, the entrance of persons must of course permit the introduction of additional air which has not undergone the settling process.

The volumes of transactions of the last two meetings of this Society contain descriptions of a device for separating these floating agents from the air by means of water. The plan was found to be reasonably successful, but some material would always get through, as proved by potato cultivations; fresh slices of potato being exposed for twenty minutes in the air thus treated, and then sealed up.

The present purpose is to explain a device for sterilizing air by passing it through cotton. To overcome the friction and drive away non-sterilized air surrounding a wound which is being made in a surgical operation, the force of a fan is employed which is run by an engine. By establishing a hurricane on one side of the cotton, a moderate wind is secured on the other, having a force sufficient to overcome the effect of light specific gravity in the warm sterilized air. For surgical purposes, the addition of a small amount of steam is desirable, in order not to dry the exposed moist surfaces, and an arrangement for that purpose is seen in the drawing.

The surgical necessity for a temperature equal to that of the body is secured by gas jets in the course of the pipe carrying the sterilized air. In this scheme the particulate material is supposed to be arrested by the cotton, which, at the end of the necessary period, can be burned.

The arrangement is in the form of a chest of drawers, the outside of the chest being a cube of fifty inches. There are two chests. There are three drawers in each chest, each having an area of cotton 40x40 inches; equal to 1,600 square inches; the area of the six being 9,600 square inches. There are two air-tight floors, besides the lower floor of the box; one below the upper shelf and one below the middle shelf. The air enters above each shelf of cotton and escapes below it. A sheet of woven wire with three-quarter inch openings serves as the support for the cotton, which is about an inch in perpendicular thickness. The arrows show the course of the current of air.

Observations are in progress to prove the approximation to perfection of this device for depriving the air of the material in it which is capable of starting and perpetuating changes in organic substances.

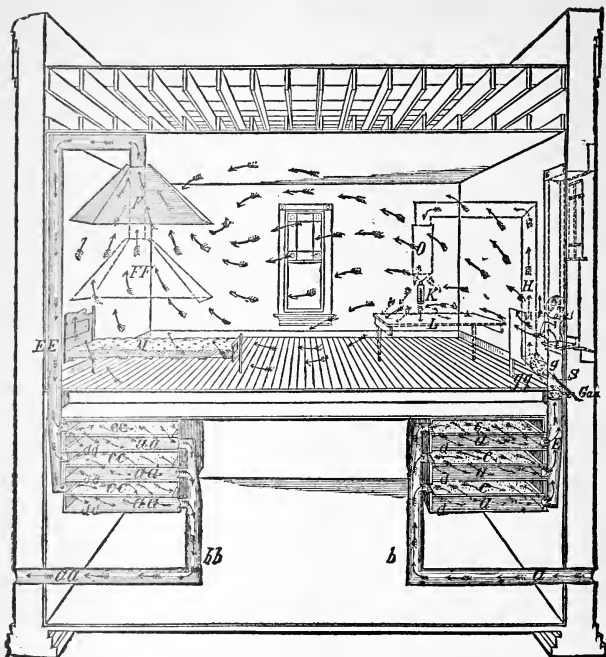
An experiment to determine the penetrability of cotton by gases while the particulate material is arrested, has been made by burning sulphur in the air previous to its passage through the cotton, and finding that the sulphur dioxide passes readily through, while the particles which ordinarily give a blue tinge to the sulphurized air, have been arrested in the cotton mesh, leaving the air perfectly transparent.

The room in which this scheme has been worked out for *surgical* purposes has a capacity of 3,360 cubic feet.

The blower (No. 10 of the Sturtevant manufacture) revolves 3,512 times in a minute. This is a rate of speed which makes very little noise and is sufficient for the purpose. At this rate of speed it is estimated by the manufacturer to carry 662 cubic feet of air in one minute. This rate of air supply would completely change the air of the room in five minutes.

There are, however, three elements of loss, viz: the slipping of the band, the escape by leakage through a long pipe, and the resisting influence of friction by which the fans of the blower slip on the air which they propel. It may be assumed that this loss amounts to one-half. The air of the room would then be completely changed once in ten minutes.

The accompanying cut illustrates an arrangement for sanitary as well as for surgical purposes.



- a. Inlet pipe.
 aa. Outlet pipe.
 b. Ascending inlet pipe.
 bb. Descending outlet pipe.
 E. Ascending inlet pipe.
 H. Ascending surgical pipe.
 O. Descending surgical pipe, to be raised or lowered.
 K. Thermometer.
 Under g and over gg is the oblique *surgical* branch of the inlet pipe.
 Gas. Gas flame for regulating the temperature of the air escaping from O.
 S. Steam jet for regulating the moisture of the same air.
 g. At the top of the straight pipe g is an eye looking at the flame below.
 Above g is the curved end of the inlet pipe for the *sanitary* use of purified air.
 gg. Over gg is a screen to interrupt the straight horizontal blow of the same air.
 EE. Descending outlet pipe.
 F. Canopy.
 FF. Canopy let down.
 L. *Surgical table in section.*
 M. *Sanitary bed in section.*
 The important objects are in section.
- c, c, c. 3 cotton filters for inlet.
 cc, cc, cc. 3 cotton filters for exit.
 da, da, da, 3 floors under the inlet filters.
 dd, aa, dd, aa, dd, aa, 3 floors under the outlet filters.

A practical plan of observation or test of the purity of the air thus treated is to expose for twenty minutes a series of slices of fresh boiled potato, or sterilized flasks or test tubes containing sterilized liquid to the filtered air. These objects are placed on a table within the scope of the inflowing air which has passed through the cotton, after which the exposed material is sealed up for future observation. Similar material sterilized in the same way is to be exposed to the open air the same length of time and sealed the same way.

Another set of the same kind of preparations is subjected in the same way and for the same length of time in any room in which it is desirable to test the condition of the air. Some observations have been made showing the superior purity of air thus treated, but perfection has not been reached.

The cotton is found not to arrest the particulate material in motion to the same extent as in still air. The cotton plug of a test tube is not the seat of any motion whatever. If, however, the attempt is made to blow through a tube closed with cotton, the analogy is perfect—the particulate material will gradually travel through, and in a little while it will become necessary to renew the cotton.

b. For completeness of classification, mention should not be omitted of personal cleanliness. The hair-brush and nail-brush are not less important than a bath and clean clothes. Neglect of these may forfeit the good results of any amount of painstaking in everything else. The surgeon is very likely to forget himself and to put his dusty head directly over a wound which he unconsciously plants with whatever may fall from it.

It is one good office of the appliance, illustrated on page 7, to prevent the head from coming directly over a wound and to blow away from it any dust which may fall from the head.

c. *Dry aseptic dressing impenetrable by particulate material.*—The prevention of the approach of the agents of sepsis to a wound, after it is once made, was about twenty years ago a study by Guérin, of Paris. He employed cotton in large volume, and refrained from examining the wound for many days. He was often successful in avoiding putrefaction, but the failures were too numerous for the general popularity of the method.

The employment of air-tight enclosures has been followed by no

better success than the employment of cotton which permits the flow and change of the air. The cause of failure was obviously the implantation of the germs of decomposition which proceeded to develop putrefaction and pathological changes under the seal intended to keep them out.

Once the invaders are in, of such kind or force as to make head against the resident forces, they cannot be smothered in this way.

11. *Antiseptic.*—The first attempt of Joseph Lister to neutralize the material falling upon a wound from the air was made in Glasgow nearly twenty-five years ago. (See the Biennial Retrospect of the New Sydenham Society for 1865-'66, page 219.) After this sterilization the wound was protected by medicated cotton or gauze from the approach of any more atmospheric dust.

Up to that time it had generally been thought the safest way, in the absence of the attempt to secure union by adhesion, or, in the failure of it, to keep the wound clean by frequent or perpetual irrigation. During our civil war many substances were tried as wound lotions with varying success, all of which afterward yielded to the superior value of carbolic acid.

The desideratum has been to find some agent which could be employed in sufficient dilution to be safe to the exposed wound tissues, and yet destructive to organic invaders when brought to the same surfaces. Nothing has yet been discovered superior to carbolic acid.

a. *The Spray.*—It may be most convenient here to notice the employment of carbolic spray during the formation of wounds or immediately afterwards. It is well enough settled that it is not a germicide, but it does not follow that it is useless.

One of the important things to be secured is such a state of the exposed tissues as will most favor the production of a rapidly organizing exudate, capable of enclosing such germs or organic agents as may fall upon the surfaces and digest or dissolve them. It may be supposed from what is observed that the carbolic solution benumbs the organic invaders and retards their development until the cells in the exudates have had time to develop their digestive fluid by which the invaders are destroyed.

The criticism, therefore, that the spray carries more dust into a wound than would otherwise go there, is of no force if a circumstance is secured favoring the destruction of this organic dust. The

effects of various irrigations, made in the progress of a surgical operation, are partly explained in the same way.

b. The Dry Antiseptic Dressing.—It is in the scope of this paper to mention the dry treatment and the wet. The preponderating force of Lister's opinions has given the dry treatment the general acceptance. Two circumstances, however, are necessary to the success of the dry treatment.

First, the primary absence of the atmospheric dust, or that the floating particles lodging upon the surfaces shall be destroyed by the antiseptic agents—carbolic acid, sublimate solution or other substances, or by the *digestive* character of the exudates from the wound, or that there shall be included in the dressing some agent which is capable by its presence of preventing septic changes.

It may be claimed that, if nothing is present in the air except the ordinary agents capable of effecting the decomposition of animal substances, the dry method is generally successful, but if there be exposure to pathogenic microbes or their germs, as those of erysipelas and gangrene, the dry dressing may be disastrous. There is no known vapor that is safe to the tissues and at the same time destructive to these agents.

The employment of oil containing ten per cent. of carbolic acid may be called a dry dressing, and comes the nearest to the indications, excluding all air and coming in direct contact with all exposed surfaces. Though this may not be a germicide, yet it is impossible for germs to develop or grow in it. The question again arises, what will happen if pathogenic germs have been introduced below the cutaneous line of union, and of course beyond the reach of any agent employed in the dressing?

The complete aseptic condition of the wound being secured, it is not important that the dressing should be any more than aseptic. The antiseptic agents can only act upon the surfaces. The interior of a closed wound must behave under a dry dressing, well or ill, as there may be agents producing decomposition introduced from without or coming from within through the course of the circulation.

It has been generally assumed that there must be a breach of surface for the entrance of the germs of purulent infection.

A crucial observation was made by Dr. Garre, Assistant Professor in Socie's private laboratory in Bale, Switzerland, an account of

which is given in "Micro-organisms in Diseases," p. 441, New Sydenham Society, 1886.

"On June 17th, 1883, a pure cultivation of the third generation from the pus of the same case of osteomyelitis (employed in previous observations) containing staphylococcus pyogenes aureus, was employed in the following manner :

"After washing my left arm with distilled water, I took the whole of the cultivation from the test-tube and applied it by rubbing over the region of the supinators in the same manner that one rubs an ointment upon the skin. Agar agar was rubbed over the right arm. Nothing pathological could be seen upon either fore-arm.

"Hyperæmia, with a sensation of warmth, became apparent on both sides and disappeared in less than an hour. Six hours later there was a burning sensation in the skin upon which the inoculation of micro-organisms had been made, which steadily became more intense and disagreeable. The sensation was like that produced by nettles. Redness and turgescence became more evident.

"In the course of the evening pustules of the size of a pin's head developed around some hairs, and in the morning these were fully developed, so that pus was obtained for inoculation. On the eighth day pus from the depth of the abscesses was inoculated.

"With the exception of some neighboring furuncles, the suppuration had come to an end in three weeks, leaving seventeen scars.

"From this observation it is evident that furuncle, carbuncle and whitlow are infectious diseases, and that they can be caused by the same coccus as is found in acute osteo-myelitis, and that the yellow producing coccus found in these affections is identical."

This observer goes on to remark that the mode of application purposely employed in this experiment is in close analogy with what often happens accidentally. He thinks that in furuncle the infection finds its way through the ducts of the cutaneous glands, and that there are no grounds for assuming that the secretory organs of the skin behave differently towards infectious invaders, from those of the mucous membranes. He refers to the effects of the germs of anthrax taken with food and to cholera and typhoid fever with reference to which it is not assumed that there must be some abrasion or wound of the surfaces.

Dr. H. Knapp, in the Archives of Ophthalmology for 1886 and in the *New York Medical Record* for December 25th, 1886, gives a narrative of a large number of experiments upon the eyes of different

animals, going through the ordinary surgical operations and employing one eye for a clean operation and employing some pyogenic infection in the operation upon the other eye.

He draws from his observations the inference that pyogenic microbes cannot attack healthy living tissues. They may live in the healthy fluids of the body, but they must wait for some deterioration of the vital forces before they can attack the tissues and develop an exudation which is the essential element of pus. The leucocytes occupy the position of accidental intruders into the exudate which is the work of the pyogenic microbe.

It is not enough for the surgeon to employ antiseptic precautions; the poison of an abscess about the teeth or elsewhere may give occasion to the entrance into the blood of pyogenic microbes which enter a wound by the back door.

In one of his experiments the left eye operated on septicly showed the pus coccus, while there was no suppuration in the right eye operated on antiseptically, but some pyogenic microbes and an abundance of these in the blood and in the kidneys. The microbes of the right eye seem to have come round from the left through the circulation.

From the facts and considerations adduced, it follows that external antiseptic precautions are not sufficient to prevent suppuration; that there is a back door through which the pyogenic microbes may enter, coming through the blood supply, traveling in the streams of the circulation, innocently as long as no tissue with depreciated vitality is presented, but ready to deposit themselves and to multiply when a diminished resistance is afforded, producing in one case a spontaneous abscess, and in another a suppuration in a wound or on an abraded surface, such as the peritoneum after its exposure to the air and to rough handling with fingers and sponges.

While the knowledge of the liability to suppuration in wounds without deriving from the air the causative agents, tends to diminish confidence in the immunity supposed to be secured by the external applications of antiseptic surgery, it at the same time directs the attention to the internal preparation of the patient which has been long known to be important in securing good surgical results.

These internal elements of treatment are the use of medicines which are supposed to be antagonistic to the development and multiplication of those parasitic microbes which occasion fever with a suppurative

tendency to local suppuration with febrile symptoms. Among the most valuable of these medicines are quinine and iron.

c. The wet antiseptic dressing furnishes the greatest number of safeguards against disaster in the management of wounds. Though the agents are not of sufficient strength to be germicides (or ought not to be), any germ development is in an offensive soil and can come to nothing. If the germ of any pathogenic microbe is included in a wound it will interfere with adhesion or break up one already formed, and when the liquid of the antiseptic dressing is present it is ready to go into the breach of continuity and stop the further devastation. On surfaces covered with hairs, though shaven ever so short, the dry material of a dry dressing is liable to be lifted up by the rise of the short stubs in the growth of the hairs, permitting the entrance of germs of decomposition to any unorganized exudate and occasioning its speedy decomposition.

The best agent for the wet dressing is doubtless carbolic acid in such dilution as to be slightly sweet, and applied once in twenty minutes so as to be always fresh. No redness of surface is occasioned by the application of carbolic acid in such dilution.

Unfortunately, however, there is danger of producing pneumonia when this plan of treatment is employed upon wounds of the breast or wounds anywhere over the ribs. Great care is necessary to avoid cold application to wounds upon the chest.

When there is fear that the requisite degree of warmth may not always be secured, a compromise may be made by very frequent changes of a dry antiseptic dressing with a thorough antiseptic irrigation. In all other parts of the body the temperature may be made to suit the feelings of comfort of the patient.

The greater the precaution against the implantation of germs of decomposition in a wound, the safer is the employment of a permanent dry dressing. The longer the exposure to ordinary air the greater will be the necessity for a wet dressing.

Wounds of accidents are generally exposed a considerable time, and for this reason there is the greater necessity for treating them with a wet dressing by a compress to which antiseptic liquid is applied every twenty minutes by irrigation: the antiseptic fluid falling in drops upon the wound or by a perpetual bath. The bath is especially applicable to gun-shot wounds in which there is a large amount of material destined to slough.

d. Drainage is employed to meet a difficulty by discharging fluids which most readily decompose if left enclosed in a wound, or permitting the escape of the products of decomposition.

The question of provision for drainage is that of the greater or less realization of the exclusion of the agents of decomposition, introduced from without at the time of an injury or operation, or arising within and coming from the circulation; compared with the further question of the introduction of infection along the surface of the tube employed for drainage. Another question is that of the comparative forces of vitality to master and destroy the agents introduced from without, and the power of these agents to resist the digestive or destroying vital forces.

It is well known that fluids retained in a wound, and which resist the absorbing power of the living surfaces, have a strong tendency to pass into decomposition. The microbes introduced from without are shielded from the direct attack of the exuded leucocytes with their digestive forces. The liquid is therefore in the condition of broth in a flask which has had its sterilization impaired by the introduction of microbes ever so few. If the fluid is a proper culture medium, it is a question of time, and the forces of nature can only resist by the establishing of limiting exudate, resulting in the formation of an abscess.

The removal of the liquid contents of a wound is attempted by capillary drainage, the best agent, doubtless, being sterilized fiddle strings, cut short enough. Under favorable conditions these will be subsequently absorbed.

In case of drainage by tubes, it is evidently necessary to aspirate and irrigate with such frequency as to prevent the colonization of the wound from without, after it has been finally closed up. The form of the drainage is of less importance than the carefulness of the management.

e. Temperature.—It is well known that many kinds of minute organisms (notably that of yellow fever) develop and multiply only in a temperature of considerable elevation. Many others show different effects upon animal life as they are developed in different degrees of temperature, being mild and capable of safe inoculation when derived from a cultivation at low temperature, and showing extreme virulence when derived from a cultivation at high temperature.

From the behavior of suppurative and septic agents it is probable that many of them are both cause and effect of high temperature. It

follows from this that the suppression of high temperature is a desideratum and that the subject has a place in a classification of antiseptic surgery.

The application of cold may be therefore supposed to prevent the development of suppurative and septic agents on the one hand, to control the temperature which has resulted. This means is both preventive and curative, and on this account should be resorted to as soon as the temperature rises above the normal standard.

Whether the plan of dressing be wet or dry, the external management of temperature is equally applicable. In the wet method the temperature is in the water applied, and in the dry method it is in water enclosed in tubes, which, being cold, absorbs heat as it flows through the coil. The best test of fitness is the comfort of the patient; and it is found that in any elevation of temperature cooling applications are pleasant.

The second means of controlling temperature is by medicine. Quinine has for a long time been known to depress temperature when given in doses of .6 gram (10 grains) or more, but so far as is now known to the writer, antipyrin is superior to all the old remedies. It is given in doses of 1 gram (15 grains), and repeated several times a day if necessary.

f. Shock.—The occurrence of shock has relation to the subject in the influence of depression of vitality upon the course of recovery. The ordinary sequence of great depression of temperature is an elevation of reaction, and in the attending perturbation there may be a chill, which, instead of being an event in the natural course of restoration, only aggravates the previously existing dangers. Wasting of the nervous energy is associated with the depression of temperature, though not in necessary parallelism with it.

The conservative agents therefore divide themselves into three classes—those which prevent nervous irritation, those which stimulate the heart's action, and those which keep up temperature; narcotics and cardiac stimulants, and the external application of heat.

Morphia .016, with atropia .00065, given before or during an operation, may be regarded as preservative of temperature, when digitalis in a hypodermic dose of the tincture may be trusted to conserve the power of the heart.

Heat is best applied to the lower extremities.

IMPORTANCE OF LOCAL TREATMENT IN DIPHTHERIA.

Dr. William Porter (*New York Medical Journal*):

While many eminent practitioners depend upon general medication, and some have quite abandoned all forms of local treatment, it is evident that all indications are not met unless attention is given to the local manifestations of diphtheria. If the disease is of local origin, if the systemic infection is constantly receiving fresh reinforcement by means of the ready absorption of the specific poison—aid the system by all means to throw off the incubus of infection, but also limit, if possible, the further supply.

How shall this be done? This depends upon the amount of local progress. I do not hesitate to say that I have seen a local diphtheritic exudation melt away in three or four days under proper local applications, the system being at the same time well guarded. But were these true cases of diphtheria? This much in affirmation: Several of these of which I speak were in families where one child had just died from diphtheria, where the symptoms were all indicative of diphtheria, and where there had been every opportunity for infection.

An old cry is, that a physician who professes to conduct his cases of diphtheria to a successful termination, is an alarmist, and his cases are simply follicular amygdalitis. Such a pitiable antagonism is unworthy a scientist. Mistakes do occur, and it is better they should be on the safe side; but I am willing to call a case diphtheria where I find that the child, having been exposed to the contagium, has anywhere upon the mucous-membrane of the upper passages a thick, continuous yellow exudation, closely adherent to the mucous-membrane, with a tendency to necrosis and sloughing, especially if the pulse is quick and weak and the temperature above normal. It is possible that such a case is not diphtheritic, but it is not probable, and we deal with probabilities. The differences in local appearance and general condition between a follicular exudation and the characteristic false membrane of diphtheria are usually so marked that the physician need not be mistaken, and if he does err, let him give the child the benefit of the doubt.

Beyond this class we have another, or advanced degree of the same class in which there can be no doubt as to the type of disease. We find it when called two or three days after the first attack. No

longer is there now a small patch confined to the tonsil, or to a small part of the pharyngeal wall or soft palate. The natural guardians of the child have slept and the insidious enemy is in full possession. A dense dirty yellow and some times disintegrating exudation is found closely attached to the natural tissues in some places, and in others hanging in loose shreds, while the naso-pharynx is filled with detached portions of membrane, retained mucus, and sometimes blood, and poison from this septic hot-bed is being rapidly absorbed and carried to the most remote part of the little frame. Each of these classes of cases demands special and distinct local management.

Let us consider the first class, where the membrane is yet small in extent and of recent formation. Can we close the portals of the absorbents and render the existing local focus of disease inert? After experimenting with many formulæ, I have for several years renewed my confidence in the mixture of equal parts of glycerine and tincture of chloride of iron. The more fashionable and really excellent practice of using bichloride of mercury provides for antiseptis, but not for the equally important matter of astringency. But little manipulation is needed in these early cases. A cotton-covered probe is by far the best instrument, and with it the solution is not merely brushed over, but pressed against the point of attack. There is no necessity for hurting the child if care is taken, but on the other hand, I retain a vivid picture of the good old doctor, conscientiously bound to do something, his spectacles awry, plunging a "swab" at random down the throat of a kicking child, or through the clinched teeth, scraping the mucous-membrane from the roof of the mouth by the good help of the ubiquitous tablespoon. By proper tact the application may be made easily, and if it is repeated frequently, i. e., every two hours, its efficiency will soon be demonstrated.

In the more advanced class of cases much more than this is needed. The extent of false membrane is greater, it is more difficult to reach, and the upper respiratory passages are obstructed. First, all of the detached membrane and *debris* should be removed by the syringe, and there is no better method of doing this than that described by Dr. Jacobi in the discussion following Dr. Billington's able paper on "Local Treatment in Diphtheria." (*Medical Record*.) A tepid but weak solution of common salt is an effective cleansing

agent, after which a spray of bichloride of mercury solution can be used. The spray should be used warm, and to protect the nostril I often pass over the end of the spray-tubes a small piece of rubber-tubing and roll it up, so as to fit the nostril fairly well. There is no use in attempting to employ the more direct and potent applications by means of the probe in these cases. Many other agents have been used by spray and inhalation or insufflation, such as carbolic acid, lime water, weak solutions of iron, etc. These are useful, but time forbids speaking of all.

When there is great irritation from laryngeal involvement—if the exudation is not too great—the vapor from slaking lime often gives relief.

I should greatly exceed my limit of time did I attempt to discuss the relative value of tracheotomy and intubation. The opportunity is given, however, to call attention again to what I believe to be an important addition to the ordinary procedure in tracheotomy, i. e., to fill the larynx above the artificial opening with a pledget of cotton or small sponge saturated with an antiseptic solution, to prevent, if possible, the extent of the local disease by continuity of surface.

Let me repeat these thoughts: 1. Diphtheria is, in its incipency, a local disease. 2. Local treatment is important, an aid to, but never a substitute for, the careful general medication and care. 3. The exact means used in local treatment may not be important, but the end to be accomplished is the speedy sterilizing and disintegration of the diphtheritic exudation, without injury to the adjacent tissues. 4. The local treatment must be conducted promptly, persistently and carefully.—*American Medical Digest.*

THE VALUE OF CALOMEL IN CERTAIN DISEASES OF CHILDREN.

The careless and indiscriminate use of calomel properly leads to its condemnation as a remedy, but now that the cases in which its employment is indicated are being recognized with a greater clearness, we can recognize the great value of this remedy in diseases of children, especially if properly selected. Dr. George B. Fowler, in

the *New York Medical Record* for November 19, 1887, refers to several affections common to children in which the greatest advantage may be expected from its employment.

Diarrhœas.—Diarrhœas in children are of varied severity, and many depend, in otherwise healthy individuals, upon several different causes—over-feeding, improper feeding, dentition, and other nervous influences, atmospheric disturbances, and changes of temperature. Whatever the cause, the first thing to happen is an arrest of, or interference with, digestion. The food then begins to act as a mechanical irritant, or, ptomaines and poisonous gases being produced, as a chemical one, and diarrhœa ensues. Here calomel, given in 1-6 grain doses, and combined with the bicarbonate of sodium and a little sugar, repeated every half-hour, until one-half or one grain, according to the age of the child, has been administered, will in most cases, relieve the symptoms. Of course the diet must be carefully regulated, and it may be necessary, after the bowels have moved several times as an effect of the medicine, to administer small doses of Dover's powder at intervals of two or three hours—1-5 to $\frac{1}{2}$ grain.

Dr. Fowler believes that the remedy in this affection acts both as a cathartic and antiseptic. It relieves congested mucous membrane, and, if there be vomiting, is almost unequalled in relieving that symptom. In entero-colitis he proposes the same plan of treatment as in simple diarrhœa, and in cholera-infantum, combined with stimulants and hot or cold water enemas, as the case requires, he has succeeded in obtaining excellent results.

In all the common *derangements of digestion* where slight diarrhœa may or may not alternate with constipation, and hard balls of pale fœces are voided. Dr. Fowler gives calomel in minute doses twice a week until the bowels are uniformly loose. Then he gradually reduces the frequency of the dose, and, finally, after about three weeks, stops it altogether. For peevishness, fretfulness, anorexia, accompanied or not with slight fever, calomel is the remedy.

For *intestinal worms* the author uses nothing but this agent. In fact, whenever he desires a cathartic effect, he rarely employs any other medicine than this salt of mercury.

It has long been known that calomel caused an increase of the discharge of urine, and within a year or two several papers have

appeared reviving the treatment and attempting to explain its action in this connection. The writer has employed it in two cases of *pleurisy* with the best results. The urine in both instances was markedly increased, and this, together with the slight catharsis, was effective in rapidly causing absorption of the fluid. It is certainly indicated in other dropsical conditions. It is safer and more active than digitalis and acetate of potassium, to say nothing of its preference as regards taste and ease of administration. In *pneumonias* of children, where there is danger from œdema of the lung, or suffocation from accumulated absorbent powers by relieving these conditions and averting the danger.

Dr. Fowler is likewise a strong advocate of the use of this salt in diphtheria, and believes that it is the best remedy there is to combat this dread affection with advantage. His experience with it in this disease has been so extraordinary, so incredible, having only lost two cases out of thirty, that we can scarcely endorse his eulogy of the drug in this disease. He claims for calomel that it is the best and most agreeable cathartic for children, and that it is an antiseptic and an effective diuretic; that all will admit.—*Therapeutic Gazette*.

A NEW METHOD OF EMPLOYING IODINE FOR ANTISEPTIC PURPOSES.

Antiseptic medicine—not merely preventive, but employing antiseptics as therapeutical agents in the treatment of disease, more especially of a zymotic type—is more and more becoming worthy of the attention of physicians. It will be frequently noticed that the remedies employed in the treatment of infectious diseases for the protection of those in attendance and for the prevention of the spread of infection, often produce satisfactory changes in the conditions of the patients themselves. Thus, fumigation of the sick-room of a scarlet fever patient will often be attended with a marked diminution of the throat-symptoms, and with a perceptible decrease of pyrexia, restlessness, exhaustion. It appears to be tolerably well established that the most favorable period for the propagation and development of contagion is in the night-time: perhaps mainly

because the sunlight is temporarily withdrawn, and, the house being closed against the free transmission of air, impurities from exhalations, excretions and various other sources accumulate. Accepting this statement as correct, it occurred to Messrs. J. H. Cass and Geo. Brownen (*Medical Press*, October 5, 1887) that if the materials employed for illuminating purposes in the night could be utilized for the evolution of a disinfectant, a useful preventive of contagion would be obtained. Koch came to the conclusion that the only effective disinfectants besides chlorine, bromine and iodine are corrosive sublimate, osmic acid and potassic permanganate.

We must necessarily exclude the mercurial sublimate from our consideration. Valuable, perhaps the most valuable, as it is among antiseptics for local surgical application, its highly poisonous character forbids its employment as a general medicinal disinfectant. Osmic acid and bromine are too expensive for general use, and the offensive odor of the latter would also militate against its employment. Chlorine has the same objections from the disagreeable pungency of its vapor. The potassic permanganate is also comparatively valueless unless employed in considerable strength. Iodine, however, presents some of these disadvantages. It has long been recognized by all authorities as a true germicide disinfectant. Iodoform, which acts by the gradual and continued liberation of free iodine, is now almost universally employed in the surgical application of antiseptics. The deodorizing properties of iodine have been long known, and although it has for very many years been employed for that purpose in the cancer wards of the Middlesex Hospital, and probably in many other similar institutions, its employment as a general disinfectant has been greatly lessened, owing to the difficulties experienced in its regular and gradual vaporization. Combined, however, with salicylic acid, we find that it can be readily and permanently incorporated with fats, paraffins, or wax, and when candles made from these hydrocarbons thus treated are ignited iodine is evolved in a gaseous vaporized form. The phenol is produced by the decomposition of the salicylic acid, and its amount varies according to the temperature or rate of the combustion. Its presence may be verified by passing the vapors of the combustion through dilute nitric acid, and thus producing trinitrophenol or picric acid. But where the combustion is rapid and complete the phenol is entirely destroyed, as all other *organic*

materials, such as eucalyptus, which has been suggested for somewhat similar treatment, must necessarily be. It is not so, however, with regard to the iodine. Being *inorganic*, it is wholly volatilized and thrown out as vapor into the surrounding atmosphere, but it is in no sense destroyed. Its presence in the gaseous products of the combustion may be demonstrated by passing them through a solution of starch, or along a tube moistened with starch mucilage. In either case the iodide of starch is speedily produced, and may be recognized by the usual tests. A very faint odor of iodine may be detected when these candles have been burnt in quantity in a close atmosphere; but this is never unpleasant, or in the least degree irritable to breathe; indeed, in several cases of asthma, spasmodic cough and "hay-catarrh," the patients have experienced great relief from the iodine-vapor thus liberated. As a deodorizer its action is most marked; the smell of tobacco-smoke is quickly and entirely destroyed by the combustion of these candles in the smoking-room. The air of stuffy rooms and smelling closets may be rapidly purified by the same means, the odors of sulphuretted hydrogen and of ammoniacal air from a close stable have been very speedily and completely discharged by contact with the same vapor.—*Therapeutic Gazette*.


A NEW ANÆSTHETIC.—Dr. Njuschkon, in the *Casop. Cesk. Lékár.*, advocates the use of kandel in the place of ether or cocaine. Kandel is a product formed by the distillation of naphtha, and is a perfectly clear, colorless fluid, extremely volatile, burns easily, and smells slightly of benzine. It can be mixed with a small quantity of water or alcohol. The preparation of the drug is simple, and it is very cheap. Its actions can be fully relied upon. It is used in the form of a spray as a local anæsthetic, and in one minute will reduce the temperature to -10° C., and the drug will keep it pretty uniformly at that temperature for some time, while ether reduces the temperature to -17° C. The skin becomes very hard, and is completely anæsthetized, and there is either no bleeding at all, or else the blood coagulates as soon as it makes its appearance, so that all operations may be performed with great ease and rapidity.—*Le Progrès*, October 5, 1887.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

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WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C.,	} Editors.
GEO. GILLET THOMAS, M. D., " "	

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COCAINE IN COMBINATION WITH PETROLATUM AND WITH OLEIC ACID.

Theoretically we would expect to get anesthetic results from cocaine hydrochlorate applied to mucous-membranes, that the blandness of oleic acid and petrolatum combined with cocaine would have a sedative effect, after the first sensation of fullness disappeared. Such is not the case, however; on the contrary, we have had some very unpleasant experience from the remedy used in the combinations mentioned for the relief of pain. In one instance a patient having strictures had to have dilatation performed, but the urethra was so exceedingly sensitive that the passage of an instru-

ment in the most delicate way was accompanied with decidedly grave symptoms. Cocaine had just come into vague and a 10 per cent. solution in oleic acid being at hand was injected into the urethra by means of a small oil can (such as is used for sewing machines). The pain following this was agonizing, and the operation had to be abandoned.

In another case a patient had a missile imbedded in the cornea, and to make a painless operation, a drop of the 10 per cent. solution of cocaine in oleic acid was put in the eye, causing so much pain that nothing could be done at all for the relief of the patient until the pain from the drug had disappeared.

Another case was that of vaginitis in a child. The heat and itching of the vulva were great, and the idea suggested itself that an addition of cocaine to petrolatum and bismuth would soothe the parts. On the contrary, the pain was so great that it had to be washed off, and the alarmed mother sent to see if they had not been given the wrong medicine by the druggist.

One more instance will suffice: For a patient suffering with coryza of a very worrying sort was prescribed petrolatum, bismuth and thymol to be snuffed up the nostril. It occurred to the writer that by adding cocaine to this combination he would get a decidedly soothing effect. The result was agonizing pain instead of relief.

We have given enough examples to serve to warn practitioners against prescribing cocaine with fats expecting to get anodyne results, when the mucous-membranes are implicated, at least. We do not believe it is a common practice to use cocaine in this way, and it will be less common after the experience of one or two cases like ours.

OVARIOTOMY IN THE HANDS OF GENERAL PRACTITIONERS.

Ovariectomy is a generalized specialty, and has become so in a remarkably short space of time. General practitioners all over the country can score in nearly every small town one or more cases of successful ovariectomy, where fifteen years ago it was left entirely to the specialist. Formerly all who were able to bear the expense of a trip to a Northern or Southern college town went there to submit

themselves to the operation, and the poor women who were not able submitted themselves to be tapped until death came to their relief. In the short space we have named all this has changed, and the desperation of many of the latter class of women has nerved the family physician, and with the mutual understanding that their physician had only general knowledge of the subject, and the patient, only too eager to take her great share of the risk, case upon case has accumulated, until the special skill has become general. This operation has opened up a new field, and the question now is, will it always be so that such serious cases shall be for us general practitioners confined to the poorer classes.

We know of a series of cases of ovariectomy in which the remuneration to the operators did not amount to two hundred dollars, perhaps, and all of this came from two patients, the total number being about a dozen. In one case we know of, the operator not only found that the expense of the patient was to fall upon him, which included house rent and provisions, as well as medical attention, and the support of the entire family of children, but in addition to this the nursing fell almost entirely upon him, and it was unintermitting. He saved the woman's life, and added stock to his already varied skill. In all the above series mentioned the most valuable gain was in resulting skill, and this is the experience in by far the larger number of cases in the South.

Notwithstanding these hardships, every day the number of ovariectomies is on the increase in the South. Few of them are done in hospitals, many are done in private houses—generally the humble cottages of the poor. The sanitary surroundings are usually unpromising, and the nursing of the volunteer or hap-hazard sort, except so much of it as is done by the doctor in charge of the patient.

The organization of small hospitals in this State (there are now about half-a-dozen) will serve as an impetus for future ovariectomies, the isolated practitioner seeking the nearest town where he can have the assistance of enough heads and hands to do what he could not do unassisted. What is true of small hospitals for ovariectomies is true for other surgical diseases, but no disease which modern art and science has lifted from peril yields such good results—saves so many lives. We hope to publish the statistics of ovariectomies in this State.

REVIEWS AND BOOK NOTICES.

CYCLOPÆDIA OF OBSTETRICS AND GYNECOLOGY. Vol. V. GYNECOLOGICAL DIAGNOSIS, GENERAL GYNECOLOGICAL THERAPEUSIS. By R. Chobak, M.D. ELECTRICITY IN GYNECOLOGY AND OBSPETRICS. By Egbert H. Grandin, M.D. With 160 fine wood engravings.

The titles of this volume indicate its contents. The methods of examination and results attainable; position of use in gynecological examination; the inspection of the abdomen; abdominal palpation; percussion of the abdomen; mensuration of the abdomen; auscultation of the abdomen; digital examination of internal pelvic organs; examination by means of the sound; examination with speculum; dilatation of the genital tract; artificial dislocation. All these topics are discussed, to which is added, under the head therapeusis, anesthesia, the use of antiseptics; the application of fluids to the vagina and uterine; the use of medical agents in solid form; the use of caustics; the use of the tampon; local venesection; the use of the curette; the use of pessaries; the application of abdominal bandages; massage; subcutaneous and parenchymatous injections. It will be seen that all the elementary teaching necessary for beginners is here given. To this is added a very complete summary of the electrical instruments used in gynecology, with their application, which is from the pen of Dr. Grandin, of New York.

DISEASES OF THE OVARIES. By Dr. R. Oldshausen. With 36 wood engravings. Edited by Egbert H. Grandin, M.D.

To no volume in this valuable series will there be more earnest resort for consultation and study than this one. The work of German gynecologists has been somewhat underrated, of late, by the advanced school in England and America. Ovariectomy, unlike most capital surgery, is likely to fall to the lot of the general practitioner. All cases of ovarian disease cannot go to the specialists, and few general surgeons and physicians would let a case pass when a life is at stake and he has some assurance of his ability to do good. To all such this book will be read diligently. Not only German surgeons, but those of all countries are put under contribution for opinions, methods and statistics. The author writes with

clearness, and has divided his subject so that it can be easily comprehended and referred to in time of need. In such a volume we will of course meet with opinions and methods not in accordance with what we know and read of in our practice, but for sound teaching and thoroughly well digested matter, we know of not another book its superior.

STERILITY: DEVELOPMENT OF ANOMALIES OF THE UTERUS. By P. Müller, M.D.: and **THE MENOPAUSE.** By E. Börner, M.D. With 50 wood engravings. Edited by Egbert H. Grandin, M.D.

This is volume XI of the *Cyclopædia*, opening in the second chapter with a historical retrospect of generation, which is followed by a chapter on propagation in general. Ovulation, the transmigration of the ovum, menstruation, the production of semen, the transmission of semen, cohabitation, the migration of the spermatozoa, insemination and conception are discussed in continuation of the subject, until we come to sterility in general. The delicate subject of the causes and treatment of sterility is handled with dignity and scientific modesty, in strong contrast to some literature on the same subject which has come under our notice of late.

Coming to *Developmental Anomalies of Uterus*, we find a most elaborate survey of the whole subject, beginning with the development of the uterus, and carrying us on through every possible physical distortion, atrophy, absence of parts, etc., etc., with all that minute pains-taking which characterize the best German writers.

THE MENOPAUSE, the concluding section of the volume, is rather uninteresting in style, but full of matter wisely discussed and well arranged.

In both sections of the volume we are not given at every step the array of German writers to the exclusion of the English and American, but a broad survey of the scientific world is included. To leave out Marion Sims' work in the discussion of sterility in women would have been to leave out all that is most important.

DISEASES OF THE TUBES, LIGAMENTS, PELVIC PERITONEUM AND PELVIC CELLULAR TISSUE; EXTRA UTERINE PREGNANCY. By L. Borndl, M.D.: and **Diseases of the External Female Genitals; Lacerations of the Peritoneum.** By P. Zweifel, M.D.

This is volume XII of the *Cyclopædia*. The figures illustrating the diseases of the tubes and extra-uterine pregnancy are quite

numerous, none will be more carefully examined than the text and the figures illustrating remnants of inflammation in the neighborhood of the uterus and its adnexa.

Prof. Zweifel's section of the work is a most elaborate study of the abnormalities of the external genitals, illustrated with a chromolithograph of the "Hottentot apron," and many wood cuts.

Lacerations of the perineum and vaginismus are treated in concluding chapters.

It has not been our purpose to give a critical review of these excellent volumes as they appear, but rather to give a rapid outline of them, to serve our readers in lieu of a personal examination. As far as the work has gone it is well worthy of a distinguished place in our libraries. No American can afford to neglect the study of German work in gynecology, but many are debarred from such knowledge by ignorance of the German language. These volumes, therefore, cannot be dispensed with by the practitioner who gleans conscientiously the best of everything for the benefit of his patients.

A TREATISE ON DISEASES OF THE SKIN, with special reference to their diagnosis and treatment, including the analysis of 11,000 consecutive cases. By T. McCall Anderson, M.D. With colored plates and numerous other illustrations. Philadelphia: P. Blakiston Son & Co., 1887.

Books on diseases of the skin are numerous and expensive. Nearly every doctor has his favorite volume of reference when he gets a puzzling case, and the majority of doctors cannot be said to study this class of cases at all, merely footing up for the occasion upon any new case. Confusion of nomenclature has done as much as anything else to bring the real study into disrepute. Of late, though the books which have been written are decidedly helpful and practical, and it would matter little which of one of a half dozen we could name was adopted as an exclusive text-book, it would suffice to put the reader *au courant* with the state of the science as it stands.

The volume before us is one of those excellent treatises which come at long intervals, and serve to win readers back again to a difficult subject. The impression which the writer makes is that all his statements are abundantly fortified by practical experience, and he seems never to lose sight of the fact that he is writing for the general practitioner and not for the specialist.

Diagnosis is the most difficult matter in connection with the subject of skin diseases, and many expensive and beautiful works have been brought out at the cost of infinite labor to the authors, and with small remuneration, but their circulation is limited. A verbal description of diagnosis necessarily presupposes a knowledge of general medicine and some observation as to the diseases themselves, but Dr. Anderson has done all that words can do to convey an impression of the portraiture of skin diseases. He often resorts to tabular parallel symptoms, enabling the reader to catch at a glance the salient points of difference between similar affections.

The chapter on eczema is especially full and practical. The doctor who will read attentively this whole section cannot fail to get a good comprehension of the different forms of eczema and its treatment. On another page we have given what he has to say about the use of arsenic in eczema.

Dr. Anderson says that his experience is that of one not exclusively engaged in the study of cutaneous affections, but who is also a hospital physician and teacher of medicine. Several special articles are furnished by others, and the author has no doubt strengthened the authority of his volume by calling in such aid.

The illustrations in color are not excellent, but have the advantage of not being too highly colored, while the others are quite satisfactory. The index is copious, and, as far as we have used it, accurate. The American publishers announce that the volume contains the identical illustrations and the same plates as the London edition. Typographically the volume is a success.

JOURNAL OF THE ELISHA MITCHELL SCIENTIFIC SOCIETY. Vol. IV.
Part I. January—June, 1887.

This is a very interesting issue of the Mitchell Society's Journal. Four years ago this Society was organized, and is the only scientific society south of Washington, in regular working order.

Scientific research has been limited in the South to a few, but these few have made lasting names. We are encouraged to believe that this Society is the centre from which will radiate a great deal of good scientific work, and that North Carolina will be able to boast of good botanists, good geologists, good entomologists, before the century closes, as she can now boast of good chemists.

Resident Vice-President Prof. J. A. Holmes, of the University,

makes a report of the work of the Society. It shows past activity, and points to the needs of the Society. Too few scientific men lend their aid, and there is a lack of funds to print all of the good papers contributed. We believe this will come in good time, as the students at the University and the other colleges in the State get more thorough practical training in the sciences. If the University students do not carry away from that institution a hungering after one or more of the natural sciences they will not have their teachers to blame.

There is a sketch of Nicholas Marcellus Hentz, the entomologist, by Prof. Atkinson, for which we must express our thanks for the first information we have of this scientist. A bibliography of his contributions extend through forty-six years.

Prof. George F. Atkinson contributes an article on "*A New Trap Door Spider*," illustrated with wood cuts. A supplemental article is entitled "Descriptions of Some New Trap-Door Spiders; Their Nests and Food Habits." This is also adequately illustrated, and must prove of great interest as new species of spiders are described.

L. H. Manning contributes a paper on "Some New Salts of Camphoric Acid," and on "Decomposition of Potassium Cyanide." R. G. Grissom contributes an article on "*Lead Chlor-Sulpho-Cyanide*," and "*Solubility of Alumina in Sulphuric Acid*." Dr. F. P. Venable gives the analysis of water from the Artesian (?) Well at Durham. Dr. W. B. Phillips gives the concluding article on "*The Fertilizer Trade in North Carolina in 1886*," which is full of interest, and should be read by all the farmers and farmer-doctors in the State.

Let all the doctors in the State take up some study in natural history as a recreation and diversion. The most eminent scientists come from our ranks. Very much improvement of mind and body can be obtained by the pursuit of some one of the many accessible branches of science; and the aggregate of observations would build up the Mitchell Society and bring renown upon the State. We would like to suggest that those of our friends who find such excellent relaxation in partridge-shooting might divide their time in botany and entomology in the east, and in geology and mineralogy in the west. Science needs the quick eyes which are used in shooting birds on the wing to pry out the mysteries lying in wanton profusion at our feet, and has rich rewards for such.

We are pleased to note that Dr. Richard H. Lewis, of Raleigh, is

the President of the Mitchell Society for 1887-1888. He is a student of broad enough culture to grace this or any other position.

DOCTOR AND PATIENT. By S. Weir Mitchell, M.D., LL.D., Harv. J. B. Lippincott & Co., Philadelphia, 1888. Price \$1.50.

Since the days that the "World Essays"—"Among My Books," so charmed thousands of readers, especially in the South, no little volume has come so near being its rival as this delightful one before us. "Among My Books" was a collection of short essays which had appeared from time to time in the "World," but without the signature of the author, and had the name of the author before us not been given, but only the place of his residence, it would have been superfluous to have appended the name of S. Weir Mitchell. Both volumes were products of the literary atmosphere of the "City of Brotherly Love."

Our little volume is a collection of essays on "The Physician," "Convalescence," "Pain and Its Consequences," "The Moral Management of Sick or Invalid Children," "Nervousness and Its Influence on Character," "Out-Door and Camp Life for Women."

We would not like to say which essay has charmed us most, but we know that few pens could more delicately sketch the convalescent, with his faculties joyously awaking after the slumber which disease and disuse had brought upon them, the delicious feeling of looking out again upon a world that has been dead to you, and once again entering into harmony with the genial sunshine and the glossy green foliage and twittering birds, to snatch a few moments from some old friendly author whose works of love and wisdom hang around you all day as a revived fragrance, to feel the keen relish for food reappear as the clammy mouth lavishes and the limpid saliva gushes at the very odor of a long-forbidden dish. All this and very much more has our author spread before us, and thousands more of convalescents besides the one who pens these inadequate words, will find refreshment from them. Doctors and patients will be the better for having spent a spare half hour for many days over this book.

WEAR AND TEAR, OR HINTS FOR THE OVERWORKED, by S. Weir Mitchell, M.D.,

Is a valuable essay in book form which has been well received by the reading public in general, and is well known to all. Those who have not read it can procure it for one dollar from Messrs. J. B. Lippincott & Co.

DRUG ERUPTIONS: A Clinical Study of the Irritant Effects of Drugs upon the Skin. By Prince A. Morrow, A.M., M.D.

A knowledge of the idiosyncratic effects of drugs gives a happy relief of mind many times to doctor and patient, and the physician in his earlier days of waiting for patients should master this volume or some one as good. Dr. Morrow has given us some very well studied experiences the like of which may befall any of us in our practice and puzzle us no little.

The experience related of iodide of potassium agrees with ours in the main. The erythematous and acne-like eruption shows itself in the first few days of its administration if the dose is as much as 3 grains or is increased to 15. Usually in a run of three or four weeks of a full dose—10 to 15 grains—the eruption disappears gradually, leaving a marked erythema of the skin, especially about the face. If the solution administered is a strong one of iodide of potassium, and has been kept for some time exposed to light, it turns yellow by the liberation of iodine, and is more liable to cause eruption and disturbance of the stomach. Iodide of sodium is still more liable to decomposition upon exposure to light, and for this reason is not as good as the potassium preparation.

The tests for medicinal substances in the urine are very convenient and of practical value.

The treatment for the dermatitis caused by *rhus toxicodendron* given embraces that employed by many authors and will be of service for consultation.

Doubtless many other drug-eruptions remain unrecorded, and if they require treatment separately from treatises on therapeutics, we wish it may be as well stated as by this author.

EVACUANT MEDICATION (Cathartics and Emetics). By Henry M. Field, M.D. Philadelphia: P. Blakiston Son & Co.

Of all the articles none are so much used as the cathartics, and none so little studied now-a-days as they. Our patients turn away from our incomplete treatment, or ignoring us, have recourse to the numberless purgative pills and laxative compounds advertised with lavish hand all over the civilized world. The largest fortunes have been made by advertising nostrum-dealers, by supplying the public with laxative and purgative doses, promising all sorts of purification of the blood and other mysterious renovations. To begin the treat-

ment of a sick negro and not purge him, would at once consign the physician to the list of incompetents, and the negroes are not alone in this.

In the book before us we have some admirable teaching as to cathartics and emetics, because it is eminently practical, and thoroughly conservative.

Many old purgatives have dropped or are dropping away from employment in the profession which surely deserve better fate. Senna, for instance, was once a remedy in almost universal use. Black-draught and salts and senna were used in domestic and plantation practice, as well as by the profession, and only now is it coming in again in the Composition Powder of Licorice. The author states with clearness the adaptation of this drug.

To Cascara Sagrada (*Rhamnus Purshiana*), although his observations are brief, they are juster than we have been accustomed to see in regard to a drug which is, in the opinion of the writer, the most valuable that has been added to our list in twenty-five years, with the exception of such articles as cocaine and the antipyretics. He says truly that the daily use of this drug does not require an increased quantity, and the writer of this, who for two years at least has taken a daily dose (with intervals of only a few days when necessary), has found the dose tonic rather than depressing.

We can heartily recommend the reading of the volume to all of our readers, but especially to those who were ever tinctured with nihilistic therapeutics, to set them right again.

THE RECTUM AND ANUS: Their Diseases and Treatment. By Charles B. Ball, M. Ch. Univ. of Dublin. With 54 illustrations and 4 colored plates. Philadelphia: Lea Brothers & Co. Price \$2.25.

This is one of the series of clinical manuals published by Messrs. Lea Brothers & Co. It is a small octavo of 410 pages, well printed, on good paper, and well illustrated.

The author points out that antiseptic surgery has so modified the treatment of the rectum and anus that many of the old methods of treatment have been recently revised, making new information necessary for the general practitioner.

The chapter on Rectal Cancer may be taken as an example of the highly conservative character of the volume. He points out for us

the hopeful measures which have been adopted for the cure of this deplorable disease, and although he admits that statistics are not sufficiently numerous to base a positive assurance, still cases in the hands of such surgeons as Volkmann have been successful to a marked degree. The author has collected 175 cases in which the conditions necessary for faithful statistics have been carried out, and the result is 16.5 per cent. of deaths.

This is not a favorite branch of practice with many, but great strides have been made by faithful surgeons in treatment and diagnosis, and diseases of the rectum and anus are being studied with renewed interest. This little volume can be confidently consulted, as it is sound in all its teaching, is concise in its manner, and is supplied with an adequate index.

FEVER NURSING : Designed for the Use of Professional and Other Nurses, and Especially as a Text-Book for Nurses in Training. By J. C. Wilson, A.M., M.D. Philadelphia: J. B. Lippincott & Co. 1888. Price \$1.00.

This small volume is the substance of a course of lectures delivered to the nurse class at the Philadelphia Hospital on Fever Nursing. The first part of the book considers fever nursing in general; qualifications of the nurse, ventilation, removal of furniture, avoidance of unnecessary contact, disinfection, isolation, order and method in the sick-room, medical thermometry, thermometers and their use, temperature of the body in health and disease, unstable temperature in convalescence, temperature charts, temperature curves, types of fever, defervescence, lysis, crisis, recrudescence, relapse—these are the subjects, and they are given in clear language, without useless matter or too much technical language.

The remaining part of the volume contains instruction as to the general features of special fevers. Fever charts are appended to show the method of construction and for other obvious purposes. This is a sound volume for nurse students, and can be read with benefit by mothers and others who have the care of persons sick with fever.

MONOGRAPHS AND PAMPHLETS OF THE DAY.

Injuries and operations upon the kidney, by Edward A. Otis, M.D. This pamphlet deals with, first, the injuries of the kidneys, and then of operations upon it.

First, in relation to damage done, knowing that the crush blow, or fall over the kidney, was a severe one; having profuse hæmaturia, intense pain in the loins, symptoms of a collapse and the general signs of severe hæmorrhage; we can feel sure that we have to do with a ruptured or lacerated kidney, which may involve both the renal vessels and the peritonæum. What is to be done? The first thing, obviously, is to arrest hæmorrhage, and without operative interference only indirect means can be used to accomplish this. Prolonged rest in bed is of first importance. The best external application is an ice-bag. Morphia to relieve pain. The internal administration of astringents is doubtful, but are ergot, tannin, gallic acid, acetate of lead, iron, matico, hydrastis, hamamelis, rhus aromatica and others? Catheterization may be necessary, breaking up of clots with lithotrite, and, as suggested by Dr. F. N. Otis, injection of pepsin solution [but how, if not acidulated, could it do good in such a decided alkaline mass?—Eds.], and cystostomy has been done for it.

If hæmorrhage continues in spite of these means, and there is a probability that the pelvis of the kidney has been involved, surgical interference is the only resource. Simon's points, which seem sufficient for an operation, are *strong collapse* and swelling in the region of the injured kidney.

As to the operation, the vertical lumbar incision seems the most natural one, over the swelling if it exists, from just below the 12th rib to the crest of the ilium. The source of the hæmorrhage is to be sought for and ligated. In case of grave injury the ureter should be ligated and renal remnants removed. If the hæmorrhage has been stayed and immediate operation is not called for, but there are other dangers to be guarded against. They are peritonitis, extravasation, suppuration and pyonephrosis. If the kidney, by suppuration, is structurally destroyed, it is to be removed. Septic decomposition in the bladder is still another danger; for its relief antiseptic washings should be done, and even cystostomy. Several illustrative cases are given, and then the author takes up the *surgi-*

cal operations. He premises this by giving results of cases of nephrectomy, finding that deaths amounted to 21.42 per cent.

The signs of renal calculus which warrant a lumbar exploration of the kidney are (a) blood in the urine; (b) unilateral pain passing down the ureter towards the testes; (c) pain elicited by deep-seated pressure in the lumbar region between the last rib and the iliac crest, just external to the erector spinæ muscle; (d) the presence of uric acid and oxalate of lime crystals in the urine.

The incision for nephro-lithotomy has generally been made parallel to the last rib, from one-half to an inch-and-a-half below it, beginning at the edge of the erector spinæ muscle, and extending 4 to 4½ inches. This incision may be supplemented by a vertical one, as in nephrectomy, if more room is desired, or the simple vertical incision may suffice. When all hæmorrhage is stayed, the edges of the wound being held widely apart with retractors, the peritoneal fat is to be torn through; and, when the kidney is reached, the finger carefully explores the posterior surface of the organ, the abdominal walls of the patient being supported by an assistant, or pillow. If nothing indicates the presence of a stone on the posterior aspect, the anterior surface is to be explored next, the kidney being pressed backwards by the finger which is exploring the front surface. If the result is negative, a fine needle is to be passed into the renal substance in various directions, so as to puncture the calices of the kidney. Finally, an incision may be made into the calices, and the interior of the kidney explored with finger or probe. The stone, being found, is best removed by the finger. The operation completed, a drainage-tube is to be inserted, the wound closed and an antiseptic pad or dressing applied. The dangers of the operation—not great—are hæmorrhage, cellulitis, renal abscess and fistula. Healing is generally rapid. A sufficient bibliography and a tabular report of injuries of the kidneys from 1879–1887 is given.

Quarantine Laws of the United States (State and national) is a well printed pamphlet, prepared in the office of the Attorney General and published by the Department of State. It is correct as to North Carolina. We are indebted for our copy to Dr. Thos. J. Turner, Director of the Naval Museum of Hygiene, Washington, D. C.

A Case of Gastrastomy for Cancer of the Œsophagus, by J. Collins Warren, M.D. The operation owes its existence to the fact

that dilatation of stricture of the œsophagus is tedious and unsatisfactory, and the surgeon who is patient enough to continue dilatation is likely to be rewarded for his pains by being regarded as the author of some of the perforations found at the autopsy to extend into the trachea or mediastinum.

The chief objection to gastrostomy is that of so managing the gastric fistula that considerable leakage of the contents shall not take place. Most of the reports dwell upon the necessity of a very small opening into the stomach, so small that it is necessary to seek for it with a probe when the feeding-tube is to be introduced. Dr. Warren has reported this case to explain these difficulties.

The patient was 56, and dilatation was tried for some time, but the use of the probang became so difficult, and it finally became impossible. Gastrostomy was determined upon. An incision was made a finger breadth below, and parallel to the cartilage of the eighth rib. On opening the peritoneum of the right lobe of the liver presented; this was pushed aside and the stomach was found, greatly contracted and drawn up under the left margin of the wound. It was readily recognized by its peculiar color and appearance, and was drawn down without difficulty. A spot was selected about three inches from the pylorus, and one and a half inch from the great curvature, to be stitched to the abdominal walls. The peculiarity of the method consists in attaching a considerable portion of the surface of the stomach to the peritoneal surface of the tip of the wound by an outer row of quilted stitches, so that the peritoneal surfaces shall be brought together for the space of half an inch in breadth around the margins of the incision. Seven such sutures were applied, each suture being passed through the outer walls of the stomach by means of fine sewing needles. The two ends of each suture were then threaded into glover's needles, which were passed through the abdominal walls, and the knot was then tied on the surface of the skin. A needle mounted on a handle is recommended for this purpose, but could not be obtained. Ten superficial sutures united the edges of the incision to the peritoneal surface of the stomach. Here, also, surgical and intestinal needles were used alternately. This necessitates changing the needles also, which lengthens considerably the time of the operation, which on this occasion lasted over an hour. When finished, however, the result was satisfactory, as a considerable surface of the stomach was

securely attached to the abdominal wall. The single row of deep sutures, as recommended by Sir William MacCormac, ought, however, to effect the same result more speedily. The stomach was not opened; a loose stitch was left in its outer walls as a guide. An antiseptic dressing was applied and held in place by a broad swathe of plaster. The wound was dressed on the fourth day. The stitches were gradually removed. On the ninth day the operation, which was entirely painless, was performed as follows: The spot marked by the guide suture was raised by a pair of forceps, and a fine tenotomy knife was thrust obliquely into the fold thus raised. A fine gum-elastic catheter was introduced, and a small quantity of the contents of the stomach sucked up into it. This consisted of mucus stained with bile. A small quantity of peptonized milk was introduced immediately. The catheter was allowed to remain in the stomach, and was held in place by a "doughnut" pessary and bandage. Cough became troublesome, the efforts exerting expulsive strain on the fistula. The wound healed well, but complete union of the edges of the skin to the edges of the mucous membrane did not take place, a narrow border of granulation tissue separating the two. The wound became enlarged and there was considerable leakage. This was partly due to great falling in of the abdominal wall, and partly to persistent cough. After some experiment an apparatus was devised and was held in place by a pessary. The various articles of food administered were, peptonized milk, beef-tea, brandy, eggs, soup, oatmeal, bread. The daily amount administered was from eighty to ninety ounces. Oatmeal mush and bread-pulp were easily forced in with a hard rubber syringe. Occasional diarrhœa showed an imperfect digestion, and mal-assimilation existed, as the patient showed, but steadily emaciated and lost strength, and died four months after the operation.

Dr. Warren thinks that the attempt to make a valvular fold in the mucous membrane, imitating the case of Alexis St. Martin, is possible. The opening in this case was about $2\frac{1}{2}$ inches in circumference, and was near the cardiac extremity of the stomach, greatly facilitating the retention of food. Dr. Warren has just succeeded in making a fistula in the stomach of a dog, so protected by a valve of mucous membrane that the food and liquid swallowed do not escape, and is at present engaged in experiments.

CORRESPONDENCE.

MESSRS. APPLETON & CO'S OFFER TO THE CANDIDATE WHO PASSES THE BEST EXAMINATION.

Messrs. Editors North Carolina Medical Journal :

DEAR SIRS:—The enclosed letter speaks for itself. I am sure our Medical Society will duly appreciate this offer from Messrs. Appleton & Co. Please publish their letter in your next issue and send them a marked copy. I shall suggest that the candidates for license examined at other times than at the regular annual meetings of the Board of Examiners be classed with those examined at the regular meeting succeeding, and be given an equal chance of obtaining this prize.

Truly yours, J. M. HAYS.

Oxford, N. C., January --.

The letter referred to above is as follows :

MEDICAL DEPARTMENT, D. APPLETON & CO., PUBLISHERS, }
1, 3 & 5 Bond Street, New York, Jan. 19, 1888. }

Dr. J. M. Hays, Oxford, N. C. :

DEAR SIR:—Yours of the 29th ult. came duly to hand. We agree with you that a premium, offered to the candidate who passes the best examination before your State Examining Board, will be likely to stimulate those who intend presenting themselves for examination to a more thorough preparation. In accordance, then, with your suggestion, it gives us much pleasure to offer an annual premium of our medical publications, to the value of \$25.00, to be awarded to the candidate who passes the best examination. The successful competitor may select such books as he desires from our catalogue, and we will forward them to him when we are notified by the Secretary of the State Medical Society of the result of the examinations.

This offer is to take effect at the next annual examination; and in order that whatever good effect it may have shall be made evident at that time, we would suggest that the offer be made known as soon as possible to all who may be interested.

Very respectfully yours,

D. APPLETON & CO.

NOTES.

THE popular custom universally practiced of slapping a person on the back who is choking from a foreign body in the throat, cannot have any appreciable effect in expelling air from the lungs, but if the blow were made on the front of the chest instead of the back, it would be attended with a much greater success.—Dr. O. Dwyer in *N. Y. Medical Journal*.

A SNUFFING-POWDER FOR CORYZA.—M. Pierre Vigier (*Gaz. hebdom. de Med. et Chir., N. Y. Med. Journal*) considers a powder composed of equal parts powdered starch, boric acid and tincture benzoin to possess certain advantages, especially that of not being too light. The mixture should be triturated for a moment, then dried with a gentle heat, and put into a box, without pushing the powdering process too far. The rapidity of the effect is proportionate to the amount of the powder used and the frequency with which it is employed.

DR. D. J. CAIN.—We regret to learn that our esteemed friend, Dr. D. J. CAIN, is so feeble that he has retired from active work. Dr. CAIN was once a distinguished member of the Charleston faculty and editor of that staunch old ante bellum journal, the *Charleston Medical Journal and Review*. Many years ago Dr. CAIN sought health in the mountains of Transylvania county, afterwards removing to Asheville, where he enjoyed the confidence of the community. His loyalty to his profession is of the staunchest sort, and his sense of honor manifest in every act of intercourse with his fellow-men. None who were members of the Board of Examiners, in 1882 will forget the graceful dignity with which Dr. CAIN sought his first opportunity to comply with the law of his adopted State. The Board had only to be satisfied that the applicant was sufficiently versed in the science and art of medicine to practice, and they could do nothing more than waive an unnecessary examination, and fix their hands and seals to his license. The mutual courtesies were very touching, and will be long remembered by the yet unbroken circle which composed that Board. We trust that rest in the genial air of Aiken, where Dr. CAIN has taken up his abode, will restore him comfort of body and his old-time brightness of intellect.

THE "HENDON COW-DISEASE" in England, believed by Klein to be scarlatina, is proved by Prof. Edgar Crookshank to be cow-pox. The paper was read before the London Pathological Society, Sir James Paget presiding. At the conclusion of the discussion the President said there was great necessity of studying diseases of cattle by careful pathologists.

SEVERE PROFESSIONAL LOSSES IN THE NORTHWEST.—The Northwest has had severe losses in the death of Dr. Moses Gunn and Dr. A. B. Palmer, both professors in the University of Michigan. Both of these gentlemen have been conspicuous in their great work in the medical department of the University of Michigan, and were largely influential in shaping the course of this justly celebrated institution.

THE death of Dr. WESLEY M. CARPENTER, of New York, of the staff of the *Medical Record*, is sincerely regretted, not only by all who knew him, but by all who knew of his very great ability as a reporter, as an editor, as an author. He was simple in his tastes and shrinking in his way of life, as his friends tell us—a rare enough feature in these days of self-seeking. "Under all circumstances he acted the part of a pure-minded Christian man, and of no man can it be more truthfully said that all who knew him were fond of him." Truly the vocation of a physician is capable of working in us a true charity if we will allow the heaven to work.

REMOVAL OF A LARGE BRAIN TUMOR.—Dr. W. W. Keen removed a tumor $2\frac{7}{8}$ by $2\frac{1}{8}$ and $1\frac{3}{4}$ inches thick from the brain of a patient aged 26, at St. Mary's Hospital, Philadelphia, December 15th. At 23 the patient suffered from epilepsy with right-sided deviation of the head and eyes, followed by paralysis of the right arm and leg and aphasia. The initial symptoms of the epileptic fits pointed to the centre for conjugate deviation of the eyes, as discovered by vivisection, and largely upon this was based the accurate diagnosis and surgical treatment. The tumor extended from the fissure of Sylvius into the first frontal convolution, and from near the fissure of Rolando into the bases of the three frontal convolutions, and weighed 3 ounces and 49 grains. The patient was doing very well at last accounts, the highest temperature having been only 100.8° , and already primary union of the flaps has followed, except at drainage openings.—*Medical News*, December 24.

PROF. J. A. LARRABEE, Louisville, Ky., writes: "I have been well satisfied, and in several cases think the Lactated Food was instrumental in saving lives, especially so in gastro-intestinal diseases."

SÄNGER-CÆSARIAN operation was performed in Baltimore by Dr. L. Earnest Nealey, Demonstrator of Obstetrics of the University of Maryland. The mother died about the third day; the child is still living.—*Medical News*.

SIR MORELL MACKENZIE'S PORTRAIT.—We are indebted to Messrs. Parke, Davis & Co. for a fine lithograph of Dr. Mackenzie. He has a strong intellectual face of striking Scotch characteristics. Framed it will be an ornament to any doctor's office.

I HAVE used Succus Alterans in both primary and tertiary syphilis during the last two years with the most gratifying results. To the general practitioner of medicine it is a veritable desideratum.

Yours truly,

P. A. GORDON, Junction City, Perry Co., O.

MIGRAINE.—Antifebrin and antipyrin are gaining golden opinions in the hands of many physicians for migraine. It is apparently a small matter, but to be able to banish the dangerous practice of morphia hypodermatically in such cases is a very important achievement.

I HAVE used Elixir Purgans myself and prescribed it for my patients, and take pleasure in saying that it is both pleasant and agreeable to take and effectual in its results, and well adapted for either a cathartic, laxative or aperient.

Respectfully yours,

J. KENDELL, M.D., Covington, O.

ANOTHER SEARCH FOR GLEDITSCHINE.—Mr. Abraham L. Metz (*American Druggist*), of Tulane University, has examined into the gleditschine matter, both as to the trees in their reputed locality and the separation of the alkaloid. We hope this is the last we will hear of the fraud, as Mr. Metz has proven it all to be false, the alkaloid obtained have none of the properties. It will be remembered that the famous tree was first credited to a remote Louisiana parish.

OBITUARY.

DR. JOHN L. MEARES.

Dr. Meares was born in Wilmington in 1823, and was the son of Mr. William B. Meares and the brother of Hon. O. P. Meares, Dr. W. B. Meares and Mr. Walker Meares, of this city. He graduated at the University of North Carolina in 1843, in the same class with the late Judge Person and Mr. Thomas D. Walker, and also with Mr. F. J. Lord, of this city, and Rev. Joseph C. Huske, D.D., of Fayetteville. He studied medicine here under the late Dr. James F. McRae, the elder, and received his diploma at Jefferson College, Philadelphia, in 1847. He practiced his profession here for some years, but afterwards removed to Mississippi, and from that State went to California 1869. For ten years prior to his death he held the honorable and lucrative office of Health Officer at San Francisco.

Dr. Meares was twice married, his last wife having been sister to Judge Holmes, and a native of this section. She died some years ago, leaving a son and a daughter, who now mourn the loss of their last surviving parent.—*Daily Review (Wilmington)*.

DR. JAMES F. LONG.

The life and character of Dr. James F. Long, whose death was announced in these columns last Wednesday morning, deserve more than a passing notice. Not having heard of his illness, his death was a surprise to us. Since the first announcement we have received from a friend some facts connected with his life.

Dr. Long graduated at the Medical College of New York in 1858 and settled in Washington, N. C., where he soon acquired a large and lucrative practice. In politics he was a Democrat of the old school, and while never actively engaged in political contests, he took a lively interest in what was going on and kept posted on the great issues that divided the parties in that day. At the outbreak of the war he volunteered and tendered his services to his native State. He was appointed surgeon of the 53d regiment North Carolina troops, and was always a devoted friend to the sick and wounded under his care. When the regiment was placed in Daniels' brigade his duties became very arduous and his health soon gave way under the exposures of the camp, the march and the field. At the earnest solicitation of his gallant colonel and other military friends in authority, he resigned his position to save the remnant of his constitution. He settled in Western North Carolina and resumed the practice of his profession until the close of the war.

After the war he returned to the town of Washington. In 1870 he removed to New Berne, where he has lived until the time of his death, a prominent citizen, closely identified with the interests of the city. He has for several years been county physician, and the poor and destitute received his best attention, enjoying freely both his sympathy and medical skill. He never turned them away as

long as he was able to minister to their sickness and poverty. He was also at the time of his death President of the Neuse and Trent River Steamboat Company, which position he has filled for several years with entire satisfaction to the Company.

Dr. Long's highest reputation, however, was achieved as a member of the North Carolina Medical Association. His eloquence and scientific attainments made him a marked man in that learned assembly. He was the orator of the Association at Asheville. His able address on the subject of "Heredity" won the admiration and approval of his colleagues and many laymen.

In 1882 he was memorial orator in New Berne, on which occasion we had the pleasure of hearing his eloquent address. The selection of him for this duty was a fitting tribute to his service and suffering for the Confederate soldier, and well did he perform the task assigned him.

Dr. Long, though wrecked in constitution and health, carried his indomitable resolution and intellectual force with him to the end. By sheer force of will he carried his feeble body through all the difficult roads of a large practice until death relieved his brave spirit. The true and warm-hearted people of New Berne will not soon forget a man who labored so earnestly and faithfully for their good.—*New Bern Journal*.

MRS. ELLEN H. SUMMERELL.

In Salisbury, N. C., December 26, 1887, Mrs. Ellen H. Summerell, wife of Dr. J. J. Summerell, in the 64th year of her age.

Such is the usual brief announcement that tells of the departure of human beings from the busy scenes of this world, and in many instances it is all that the general public cares to know. But in the present instance such were the family connections and relationships, such the social position and such the attainments in many directions, such the strength of character and influence in the community, that the public will want to know more than this meagre outline.

Ellen H. Mitchell was the second daughter of the learned Dr. Elisha Mitchell, so long a distinguished Professor in the University of North Carolina, and generally recognized in his day as the most learned man in the State, who perished a martyr to science in the gorges of the Black Mountain in 1857, and whose remains now repose on the highest peak of that range, nearly seven thousand feet above the level of the sea. Dr. Mitchell was the sixth in descent from Rev. John Eliot—the Apostle to the Indians of Massachusetts, pastor of the First church in Boston, first minister of the church of Roxbury, and translator of the Bible into the Indian tongue. From John Eliot, through generations of learned ministers and earnest women, Dr. Mitchell inherited intellectual vigor and a consuming thirst for knowledge, that led him to brave all labor and danger to add his portion to the sum. Dr. Mitchell's wife, the mother of Mrs. Summerell, was the daughter of Dr. Elisa North, of New London,

Conn., a leading physician. It was he that first introduced vaccination, after the discovery of Dr. Jenner, into Connecticut, and such was the courage of his convictions that, having vaccinated his wife, he allowed her to go amid the infection of a small-pox hospital to prove the value of the discovery. Mrs. Summerell was born at Chapel Hill, April 23, 1824, and the associates of her childhood were her two surviving sisters and the two sons and one daughter of James Phillips—six little companions, within three years of the same age, who grew up together, and kept up a knowledge of each other at all times. The death of Mrs. Summerell is the breach of that little circle formed three-score years ago. It cannot be many years until it is formed anew above, never to be broken again.

Her education was conducted at Chapel Hill, mainly under the instruction of her father, and embraced the principal studies of the University course, including history, philosophy, the Latin, Greek and French languages. The daughter of a long line of scholars, and reared among scholars, she inherited and cultivated a thirst for knowledge and a love for books that continued to the end of her life. In the last year or two of her life she read Spurgeon's voluminous Treasury of David, Geike's Hours with the Bible, Drummond's Natural Law in the Spiritual World, and other such books as these. It may with truth be said that there are few, if any, persons of either sex in the State who had a wider range of information than she. This knowledge, in years gone by, she often used in interesting communications to the religious papers. The first volumes of the *North Carolina Presbyterian* were frequently enriched with sketches from her graceful pen.

She was married October 31st, 1844, to Dr. J. J. Summerell, and came at once to Salisbury, where she continued to reside and exert an influence as the wife of one of the leading physicians of the town for the long period of forty-three years. In those early days she was accustomed to relieve her husband, wearied by the labors of an exhausting occupation, by reading to him hour after hour the medical books and journals of the profession. She thus acquired for herself a valuable knowledge of medical science, and of the names, proportions and properties of the remedies employed in the healing art. On the first day of June, 1845, she made a public profession of her faith in Jesus Christ, and connected herself with the Presbyterian church of Salisbury, then under the pastoral care of the Rev. Stephen Frontis. Her name now stands fifth in point of age on the roll of communicants. By her intelligence, her social position and her zeal for the cause of Christ she was well qualified to exert an extensive influence in behalf of good morals, consistent conduct, and the relief of the suffering. It was her rule to give the tenth of her income to benevolent objects.

She was the mother of seven children, three of whom are gone before her, while the other four soothed her last hours with their ministrations and their sympathy.—J. R. in *N. C. Presbyterian*.

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ORIGINAL COMMUNICATIONS.

RECTO- AND VESICO-VAGINAL FISTULA—NEURASTHENIA WITH DYSMENORRHOEA DUE TO ANTE-FLEXION—REMARKS ON THE REMOVAL OF THE OVARIES FOR INSANITY.

(A Clinical Lecture, Delivered at the Hospital of the University of Pennsylvania, by William Goodell, M.D., Professor of Clinical Gynæcology. Reported by William H. Morrison, M.D.)

GENTLEMEN:—The first case which I bring before you to-day is one that I see now for the first time. There appears to be some difficulty as to the diagnosis, partly because the patient does not understand English, and partly because she does not understand herself. We learn that she is 65 years of age, that she has eight children, the youngest of whom is 25 years old, that the menopause occurred at the age of 48 years, and that eighteen months ago she again began to lose blood. This continued for six months, when

she had an operation of some kind performed, since which time there has been no bleeding. For the last ten months there has been incontinence of urine. I do not know what kind of an operation was performed, although I am told that the vulva has been closed up. Let me tell you exactly what is passing through my mind as I hear this history. Here is a woman who had the menopause at the age of 48. She has had eight children; she passes seventeen years without losing blood, and then the bleeding recurs. This at once suggests the existence of carcinoma. Then, when I hear that there has been incontinence of urine, it leads me to infer that the carcinoma has involved the bladder.

I shall next proceed to the examination. The first thing that I note is the marked varicose condition of the veins of the legs; but this has no bearing on her case. I find that the vulva has been almost completely closed, but there is a small opening through which urine trickles. When I pass the probe through this opening a little fæces and urine escape. As we have the patient etherized, I shall at once proceed to dilate this opening with the uterine dilator. The whole appearance of the patient is bad and indicates she presence of some constitutional disease. My own opinion is that we shall find malignant disease of some kind. I have now enlarged the opening sufficiently to admit my finger, but I do not find any evidence of carcinoma of the cervix. Next, having the sound thoroughly cleansed, I pass it through the urethra into the bladder, but I do not detect any vesico-vaginal fistula, although one undoubtedly exists. I find without difficulty a large recto-vaginal fistula. The opening is sufficiently large to admit two fingers. It is now apparent why the vulva was closed: a vesico-vaginal and a recto-vaginal fistula must coexist, and the surgeon, despairing of closing the vesical fistula, by closing up the vulva, has converted the vagina and rectum into a bladder.

This injury may have occurred in one of her labors. It may have resulted from syphilis. As I have already said, the appearance of the patient is bad and indicates the presence of some constitutional disease. Recto-vaginal fistulae occur most frequently as the results of lesions caused by labor. They occasionally are produced by accident. One of the most common of these accidents is the empalement of a woman on the tines or the handle of a pitch-fork as she slides down a hay-rick. It may occur as the result of abscess

during the course of the exanthematous diseases, and especially during that of typhoid fever. This kind of fistula occurs by no means infrequently as a result of syphilitic disease. We then have a form which is very difficult to close. When a person is charged with the syphilitic poison it seems almost useless to attempt to close the fistula. You cannot hope to succeed unless you treat the case with anti-syphilitic remedies at the same time. I am disposed to think from the appearance of this patient that in her case the fistula may be the result of specific disease.

The cure of a recto-vaginal fistula is more difficult than that of a vesico-vaginal fistula. The reason for this is two-fold: In the first place, the rectum is apt to contain gas which will distend it, and in the second place, the muscular fibres of this portion of the bowel keep it in constant motion. In operating on a recto-vaginal fistula it is a good plan to use two sets of sutures—a vaginal set and a rectal set. This should be combined with over-stretching of the sphincter. Sometimes we will succeed when only one set of sutures are used, but the double set is better. There is one method which I like very well in the treatment of these cases, and that is to make an incision around the fistula through the mucous membrane of the vagina, about one-half inch from the border of the opening. This is then dissected as a frill and inverted into the rectum. One set of sutures is passed through the edges of this frill per rectum, and a second set is used to bring the edges of the denuded vaginal service together. This operation is a very trustworthy one.

NEURASTHENIA WITH ANTEFLEXION AND DYSMENORRŒA.

Our next patient has also been sent to us for diagnosis. She is 33 years of age, has been married twelve years, but has had no children. The present trouble began five years ago, after the death of her mother and sister, both of whom she nursed in their last illness. This is a point which is to be remembered. A year and a half ago she had a fistula in ano which was successfully treated. She complains of pain in the back and of pain in the coccyx after sitting for a short time. She states that she injured the end of the back-bone by a fall fifteen years ago. She also has a constant dull ache in the thighs and knees. There is a burning pain in the urethra after micturition. Leucorrhœa has existed for five years. Menstru-

ation is irregular and very painful; it is accompanied by gushes with relief to the pain and continues five days.

We note, then, that she has pain in the back, but as this may come from many different troubles, let us set it to one side for the present. Her troubles began five years ago, after the death of her mother and sister. Taking this in connection with the symptoms which she had described, I should say that it is probable that her troubles are largely due to a neurotic condition. She complains of pain in the coccyx after sitting a short time. I think that it may be safely said that in ninety-five out of one hundred cases this symptom of pain in the coccyx after sitting is a neurotic manifestation, and not due to traumatism. As a rule, however, the patient will, like this woman, refer the pain to some accident. It is frequently attributed to horseback riding. It does sometimes result from injury. I know of one case where a patient suffered for twenty years with pain in the coccyx, resulting from an injury caused by a mischievous person removing the chair on which she was about to sit and allowing her to fall to the floor.

The manner in which a person with coccygodinia sits down and rises up is almost pathognomonic. The patient will grasp the arms or the back of the chair and gradually let herself down sideways to the seat. When she rises the procedure is reversed. The arms of the chair are grasped and the body is slowly raised sideways. This is seen more particularly in traumatic cases, but I have seen neurotic cases in which these movements were just as marked.

Injury to the coccyx sometimes occurs during child-birth, particularly where pregnancy occurs rather late in life, when the coccygeal joints have become ankylosed. I have heard the coccyx snap both in natural labor and in forceps cases, but no permanent mischief resulted in these cases. Yet many cases are on record in which much prolonged suffering came from a coccyx broken or dislocated during labor. I have seen coccygodynia follow falls on the ice and from analogous accidents; but yet it is essentially a neurotic disease and not a traumatic one.

This patient also has pain in the groins and the womb, together with burning on urination, and an irritable bladder. These are very generally neurotic symptoms. Leucorrhœa has existed for five years; but this may mean nothing more than that the woman is run down, just as a person may have a nasal catarrh as the result of a

debilitated condition of the general health. We further learn that menstruation is irregular and painful, and that sterility exists. I infer from these symptoms that we shall find ante flexion of the uterus. During menstruation she has gushes of fluid from the uterus with temporary relief of the pain. This is readily explained. The neck of the womb is bent. The menstrual blood cannot escape, but it collects behind the constriction until at last the swelling womb suddenly straightens and a gush of fluid occurs. At the moment that the gush occurs the acme of the pain is reached. Immediately afterwards there is a cessation of the suffering. A great metaphysician has said that the greatest bliss that a person can experience on earth is the sudden cessation of existing pain, and I think that he is right. With reference to this case my opinion is that we shall find ante flexion of the uterus, but that most of the symptoms are neurotic.

We shall next make a vaginal examination. I find a small conical cervix with evident ante flexion. It would be impossible to introduce the sound in the ordinary way, but I think that, by practicing the *tour de maitre*, that I shall get it in. The *tour de maitre*, or the master's turn, is made by first introducing the sound, as though the womb was in a condition of retro flexion. When the angle of flexion is reached a wide sweep of the handle is made, and as it descends the tip usually passes in without difficulty. I, however, fail to pass it in this case, and shall have to use the speculum. It is a rare occurrence when I cannot introduce the sound without the aid of the speculum. I now catch the cervix with a tenaculum, and straightening it, pass the sound without trouble. I obtain a measurement of three and one-quarter inches. There is evidently endometritis, for when the sound is removed about a drachm of tenacious mucus escapes.

In the treatment of this case it will be necessary to dilate the cervix with my dilator in order to relieve the dysmenorrhœa. It will also be necessary to direct our treatment to the relief of the nerve-prostration.

REMARKS ON THE REMOVAL OF THE OVARIES FOR INSANITY.

Our next patient tells us that a long time ago she swallowed some reptile, and that she feels it still living inside of her. This reminds

me of a story of Nélaton, the French surgeon. A lady in Paris went the rounds from doctor to doctor with the story that she had a baby inside of her, because she felt it constantly kicking. She finally got to Nélaton, who asked her how long it had been since she had first noticed the kicking. The reply was "twenty-one years." "Well," said Nealton, "the best thing that you can do, then, is to swallow a tutor for that child." We had a case that came here year in and year out under the impression that she had a baby inside of her. I would convince her that it could not be so, and she would go away satisfied for the time. Then she would again come back with the statement that she still felt the child kicking, and that I must be mistaken.

In studying the history of our present patient, we find that her father died of phthisis, that one brother is now in an insane asylum, and that one sister died of chorea. The patient married at the age of twenty, and enjoyed good health until the fourth child was born, nine years ago. Following this she had leucorrhœa. Later distension of the abdomen appeared. Three years ago she became hysterical and began to have spasmodic contractions of the diaphragm, or the abdominal muscles. These have continued since that time, and she is convinced that they are caused by the struggles of some monster in her stomach. These spasms do not occur during sleep, and they are most severe after meals, when the reptile, as she thinks, is gorging himself at her expense. With the exception of these abdominal movements, she considers herself well.

Examination of the abdomen shows that there is a slight swelling on the right side. This she can increase at will. Many physicians have been deceived by just such an appearance into the belief that a tumor was present. This swelling is quite distinct on palpation. The diagnosis is, however, usually made by percussion. This swelling is quite resonant, whereas a tumor would give a dull note on percussion. These phantom tumors are usually on the right side, in the neighborhood of the cæcum, and they are not always resonant. Then ether must be used to clear the diagnosis. Invariably then the tumor disappears. (The patient was now removed.)

This woman is certain that she has swallowed something living, and it is impossible to convince her to the contrary. Her mind is evidently weak, and she is in danger of becoming insane. Some of you may have noticed that when a little nervous you have had a

twitching over the eye or about the lip. This is entirely involuntary and by no means uncommon in indigestion. In the same way twitching of the abdominal muscles baffle the most skillful diagnostician until he has put the patient under ether. These movements are sometimes voluntary on the part of the woman, who morbidly craves notoriety.

I neglected to state that this woman occasionally passes membranous casts from the bowel. This is not an uncommon symptom in nervous women, and is usually associated with retroversion, although not necessarily so.

I have examined this woman to determine whether there is anything wrong with the pelvic organs. I find, in the first place, a retroversion which is easily replaced. There is also prolapse of the left ovary, and the left tube is enlarged. I cannot reach the right ovary, but it is very sensitive. There has been an old laceration of the cervix which I should say has been treated by caustics—the old-fashioned method of the past. This treatment converts the erosion into cicatricial tissue, which, undergoing contraction, pinches the cervical nerves, and the last end of that woman is worse than the first.

The question now comes up what significance has this prolapse of the ovary, and what relation exists between it and the patient's mental condition? If there is any relation between the two it would be justifiable to remove the ovaries provided the patient was willing to submit to the experiment. I am always willing to perform the experiment in such cases as this, for I think that an insane woman should not bear children. I believe that the time will come when an age enlightened in political economy will compel the castration of every insane man and the spaying of every insane woman. How shall the relation between menstruation and the mental condition be established? If the woman is quite sane until about a week before the appearance of the menses, and then she gradually becomes insane, the insanity increasing until it reaches its height at the time of the period, and then diminishing after the cessation of the menses, so that the patient has a rational period of about one week in each month, I should say that the ovarian relationship was fully established.

I have removed the ovaries in a certain number of cases, about thirteen, I believe, for insanity, where the cases have been marked

by exacerbations at the time of the monthlies. Where the insanity has occurred only at or about the menstrual periods, and there has been comparative freedom from hallucinations between times, the cases have all done very well. Where the patient has been insane all the time and only worse at the monthly periods, the operation, while it has invariably done good, has not cured the mental condition.

One of the cases that have come under my observation was that of a highly cultivated lady who was exceedingly fond of her brother. About a week before menstruation she began to hate him and to wish to kill him. Then she would begin to taste blood, to see blood, voices would whisper blood, and blood would be around her on every side. She would at such times beg her friends to remove all instruments with which she could injure her brother, for he was the only person towards whom she had this homicidal feeling. This culminated until at the appearance of the menses she was furious and uncontrollable. As menstruation ceased this feeling slowly passed away, leaving her in an exhausted condition, partly from the great strain upon the nervous system and partly from the loss of blood which was associated with it. After consultation with a number of physicians, it was decided to remove the ovaries, and I removed them. For a few months her mind, while much improved, was still weak, but gradually the delusion faded away, and she ultimately became perfectly sane.

I may refer to another case in which menstruation was always associated with insanity. The patient was well enough until one week before menstruation. She then had violent delusions, which became worse and worse, until she had to be carefully guarded. I removed the ovaries. She did not get well immediately, but the delusions became less and less marked, and she now is perfectly sane.

Where an interval of sanity exists between the periods, I am always hopeful of effecting cure. At the same time I do not hesitate to perform the operation, even if the chance of affording any benefit is a slim one, because insanity is worse than death, and because insanity is hereditary.

I shall carefully go over the history of this woman by her bedside, and make another examination more thorough than the one I can make before you.*

*Her ovaries and tubes were soon after successfully removed. They were much enlarged, and the left ones were adherent. Six weeks have now elapsed, and there has been no return of the abdominal movements.

LITTLE THINGS IN MEDICINE.

By Dr. N. B. HERRING, Wilson, N. C.

(Read at the December Meeting of the Wilson County Medical Society.)

If I may be allowed to express myself, I purpose in this paper to speak of the *agenda* of littleness in medical practice, i. e., to call your attention to some very small, but very useful things, that you will not find in the books; things that will count for you, in the long run, with the people, and make for you the distinction between the expert and the bungler. The cruminal state of our climate renders it unhealthy for trained assistants, and, as a matter of fact, we cannot always ignore.

THE PHYSICIAN AS NURSE.

Many physicians, and all the laity, imagine that no one can take medicine or drink water lying flat on the back. Such is not the case. With very ill patients pursue the following method, and teach it to the nurse: Go to the patient with the medicine, water, stimulant or food, whatever it be, and with the magnetism of kindness and authority tell him to be quiet. Slip your hand under the pillow and tilt his head forward the least bit. Tell him to open his mouth, and pour the potion in. He will swallow it before he knows what he has done. If he objects, assure him that he will succeed, that it is as easy to swallow lying on the back as it is sitting up, and he will be astonished and gratified to find that he has accomplished that which, to him, appeared impossible.

No patient can get too sick to take a bath when he needs it: Get the bath ready, take off the patient's clothing and lay him on a strong sheet. Lift him off the bed into the bath by means of the sheet as though it was a hammock. After the bath lift him back on the bed in the same manner. The physician should always superintend such baths, and your own ingenuity will supply needed details. A little common-sense and tact will often be of more service to yourself and your patients than a knowledge of the most complicated formula in chemical pharmacy. I have seen an old physician of renown try to administer a clyster of castor oil with a

Davidson syringe. Of course it was a failure, as all such instruments are intended for thin fluids only. There was nothing else at hand but a glass syringe with a slack piston. He attempted to fill that with the oil, but could never succeed in getting it more than one-fourth full, on account of the air rushing in beside the piston. In such a case draw in all that your instrument will take, invert the syringe and push out the air. Repeat your manœuvres, and success will crown your efforts with a very defective instrument.

THE HYPODERMIC SYRINGE.

is another instrument nearly always out of order, and the proper use of which is little understood by the profession. The almost universal plan of introducing the needle at an angle of 45° is not the best. Pinch up the muscle with the thumb and finger, and press the needle perpendicularly into the muscle from half inch deep to the whole length of the needle, according to the size of the muscle. It gives less pain, is easier done, and produces less irritation. The salts of mercury, especially, introduced just beneath the skin, almost invariably leave a red spot, which fades slowly and may cause a slough. I have seen sulphuric ether inserted just under the skin leave a purple spot for weeks. The needle for ordinary use should be the smallest. It makes a great difference with your lady patients.

NOSE BLEED

is an affection the worst treated of any in surgery. The directions given for plugging the posterior nares would cause an intelligent ecclesiastic to assent to the doctrine of "descent" as formulated by Darwin and amplified by Hæckel. To imitate blindly, without thought, is the office of an ape or an ignorant negro, but not the duty of an intelligent physician. As laid down in the books on surgery, it is barbarous, painful, unscientific and only accomplishes its object by indirect means. Washes, douches, astringents, etc., are inefficient, and the doctor who would apply Monsel's solution to the nasal fossæ ought to be indicted for mal-practice. Pressure, when it can be applied, is the proper remedy for hemorrhage, as you all know. This is the object of all plugs. When the front and back ends of the canal are plugged the middle portion fills with blood, and the pressure is exerted by the clot. If it could be done

easily and without pain, it is not the best way. These plugs have to come away sooner or later, and to remove them is painful and tedious, and the very means are liable to set up the hæmorrhage afresh. You are all aware that the nasal fossæ are a couple of horizontal canals about four inches long, with great depth and no width. They are nearly filled up with scroll work, not for ornament, but to multiply the surface of the smelling apparatus. This scroll work forms, or is formed by the turbinated bones, and the mucous membrane covering them is a net-work of blood-vessels and nerves, very sensitive and very subject to hæmorrhage. The smoothest instrument passed into these cavities will cause an unpleasant sensation. How abominable, then, must be the instrument known as Bellocq's canula, plugs of sponge or cotton, with possible pyæmia and death! all to stop a little blood from the nose.

HOW TO DO IT.

Take a piece of tough, raw, fat, salt pork, cut it wedge shaped, four inches long, half inch thick and three-quarters of an inch wide. Force it into the bleeding cavity—*clear through into the pharynx*—and the work is done. It is antiseptic, painless, and never fails to stop the hæmorrhage. It is easily removed, and the lookers-on are often solicitous to know what you put on the meat to produce such marvellous results. A hint to the wise (quack) is sufficient.

DRY CUPPING

to the spine is too much neglected, especially amongst neurotic females. No instruments are needed. A coffee cup, a piece of paper and a match. It will save many a dose of morphine and chloral.

THE SOFT CATHETER.

is much better to use with women than the hard ones. You can't possibly do injury with a soft catheter.

TO WASH OUT THE FEMALE BLADDER,

sit the woman on the edge of a chair, fill a Davidson syringe with the wash, *and be sure it is full*; introduce the rectal nozzle into the bladder and slowly, very slowly, pump in the fluid. When the

bladder becomes intolerant it will flow out beside the nozzle of the syringe, and then you may pump it in faster.

TO GIVE SMALL POWDERS TO INFANTS,

wet the tip of your fore-finger with your tongue, get the powder on your finger, wipe it on the baby's tongue and let it nurse. This will save strangling the child or wasting the medicine.

TO MOP OUT A CHILD'S THROAT,

twist a wad of absorbent cotton on the end of a stick and let the mop be large and bushy; dip into the wash, and at the right moment press it one time against the back part of the child's throat. This is much better than camel-hair pencils, as the pressure squeezes the wash out of the mop and diffuses it upon every part of the inflamed surface without a repetition of the process.

THE FLANNEL JACKET.

When you have a case of chest cold, pneumonia or bronchitis in a child, make a close-fitting flannel jacket to reach from the clavicle to the lower ribs; saturate this with a mildly stimulating liniment, and sew it tightly around the child's chest. It is worth more than all the blisters, mustard-plasters, cups, etc., in existence. I let my little patients wear them several weeks, and sometimes all winter, occasionally applying the liniment. About the best liniment I have used is composed of—

Castor oil.....	4 parts.
Spts. camphor.....	2 parts.
Spts. turpentine.....	1 part.
Tinct. cantharides.....	1 part.

ONE OF THE DELUSIONS

of medical practice is the rubbing of quinine on the surface of the body to get its therapeutic effect. The skin refuses absolutely to allow quinine to enter the system through its pores. Try it critically, patiently and alone, and you will be convinced.

PLACEBOS

are becoming less effectual and more out of fashion every year.

The people are becoming better acquainted with the action of drugs, and intelligent physicians, as they learn more of disease, are less ashamed of their ignorance. Ignorance, the result of apathy or inaction, is deplorable, but ignorance, the concomitant of youth, is neither disgraceful nor to be despised. The evolution of medical knowledge is a slow and painful drudgery, and the people are being taught by the few who know something of it not to expect miracles, neither to be elated by the vain pretensions of the quack.

It is just as easy to retain your patients by giving nothing, when they need it, as bread pills and inert draughts. The hum of the electric battery may be sweet music to the ears of the hopelessly afflicted, but it sings a requiem of sadness at the grave of the deceased, and grates upon the ears of the administrator of a small estate.

Mr. President, I deem it unprofessional to look too wise at the bedside of affliction. The advice of Hamlet to his mother may do in morals, but to assume knowledge when you have it not, may place you in the ridiculous light of "Sir Oracle." Either sadness or levity around the sick can never be appropriate, but the abomination of pretence, in word or look, deserves the caustic speech of Gratian to his friend, "The Merchant of Venice":

"There are a sort of men whose visages
Do cream and mantle, like a standing pond ;
And do a willful stillness entertain,
With purpose to be dressed in an opinion
Of wisdom; gravity, profound conceit ;
As who should say, *I am Sir Oracle,*
And when I ope my lips, let no dog bark!
O, my Antonio, I do know of these
That therefore only are reputed wise
For saying nothing."

SALOL.—The most recent observations (*Br. Med Jour.*) Dec. 24 on salol is that it produces marked and immediate relief of pain in cases of acute rheumatism. Its effect on the temperature is less marked than that obtained by salicylate of sodium. Salol is said never to give rise to poisonous effects. Salol is not soluble in water, and is best given in capsules.

NOTES FROM THE PRACTICE OF T. D. HAIGH, M.D.,
FAYETTEVILLE, N. C.

A CASE OF PROFOUND OPIUM POISONING CURED WITH AMYL NITRITE.

Dr. McNeill called at my office and requested me to visit with him a woman said to have taken two and a half ounces of laudanum three hours since.

From the appearance of the woman when he left her (only ten or fifteen minutes before coming to my office), he thought she might already have passed away, as she was then apparently in a dying condition.

We found a middle-aged woman, over a bar-room, lying on a bed totally unconscious; face and hands of a livid purple; pulse extremely feeble, rapid, flickering, intermitting; pupils dilated, but ragged in outline, like the pupils of a dead person; respiration did not exceed 4 per minute—in truth, I did not suppose she could possibly live fifteen minutes.

Having seen in some Western journal the report of a case of opium poisoning in which amyl nitrite had been successfully used, I had requested Dr. McNeill, on my way to the house, to procure some pearls from the drug store. A hypodermic of atropin had been given at the doctor's first visit, but with no visible effect.

The first pearl was broken and imperfectly administered. The second was more carefully prepared and the effect was most wonderful, calling forth expressions of surprise from those looking on. The face and hands quickly resumed their natural hue. The respiration gradually, but rapidly, became natural and the pulse became more steady, though still rapid and weak. Speaking to her, she opened her eyes, aroused thoroughly to her surroundings and requested (not very politely) to be left alone.

From this time nothing more was required, and I lost sight of her. She had been drinking, but she had undoubtedly taken the laudanum, of full officinal strength, and she certainly would have died but for the use of the amyl nitrite.

I had almost neglected to state that *one* pupil remained dilated for some days afterwards.

Of great service in angina-pectoris, used beneficially in asthma, and also to counteract the lethal effects of chloroform, and now

arousing to action the almost extinct vital powers of the system of the nearly fatal effects of opium poisoning, it certainly deserves a fair trial at the hands of the profession in all cases of like nature.

LEAD POISONING IN AN INFANT FROM DALLEY'S SALVE.

A child one year old, of healthy parents, beautiful in form and feature, with no hereditary taints, is the patient here presented. From birth she had been constantly under my eye—for she was the child of a friend. It was the fact that she was so carefully guarded and so systematically protected from everything which could possibly be harmful that rendered the case more obscure.

As best I can, having lost the original notes, I will write from memory the history of the case :

My services were at first required for the continued disposition to excessive constipation. Following upon, or rather accompanying this, a sluggishness of motion. A slight pallor of the face and indifference to things general amusing to children of her age.

At this time I was called to her in the night, and found her suffering from violent colic, supposed to be caused by constipation and the too free use of improper food. She was readily relieved from immediate pain, but did not rally as quickly as children usually do, but remained languid and feeble, with loss of appetite and increasing pallor and a dullness of the eye quite contrary to her natural state. Now the muscles began to waste gradually and the child became more and more listless and languid, and was content to lie on the bed, or the mother's lap, with very little attempt at motion.

It was evident that this was no usual case of impaired digestion. I began searching closely and carefully for some hidden cause. The child was taken from the breast and fed on milk. The mother's milk was subjected to close scrutiny and nothing abnormal detected. I even suspected the nurse, a faithful family servant, of using some drug, and had her closely watched and never left alone with the child. Now the stomach became constantly irritable—rejecting nearly everything—even the mother's milk, to the use of which she had returned.

So persistent were my enquiries, and so reiterated were my statements, that we had not yet found out the cause of the trouble, that at last the mother asked me, in a nervous, dreading way, "Doctor,

do you think Dalley's salve could have done it"? Without thought of the severe blow I was inflicting, I replied, "Undoubtedly it is the cause—the child is suffering from lead poison." Briefly stated, it appears that about the time of the commencement of these symptoms above described an old nurse had recommended the mother to use Dalley's salve for fissured nipples. It had been used freely and constantly. At night the nipples were smeared with the ointment and the child lying at her side and nursing *ad libitum* during the night received the full injury that would result from any poison the salve might contain.

Having now arrived at the cause of the disease, I hoped, by the use of proper remedies, to counteract the effects of the lead, eliminate it from the system and bring the case to a successful termination; but suddenly violent nervous symptoms set in—the paralysis became general, and finally convulsions, of a character I never witnessed before, occurred, and the case became hopeless.

The peculiarity of the convulsions was caused by the complete paralysis of the extensor muscles, so that when there was a contraction of the arms and limbs and then a relaxation, the limbs dropped suddenly, and with a thud, as if a dead limb had been raised and dropped from the grasp.

I had this salve subjected to analysis, and found that it contained from 4 to 5 per cent. of lead, probably in the form of an acetate.

I have refrained from publishing this case for fear of awakening unpleasant recollections; but these things should be known, lest some other dear one be lost through lack of proper knowledge.

TYPHLITIS AND PERITYPHLITIS.

By Profeser A. HARDY, Paris, France.

(A Clinical Lecture delivered in Charity Hospital.)

GENTLEMEN:—The patient of whom I am about to speak occupied bed No. 1, Ward St. Charles; he is 28 years of age, and has been employed in manual labor in a large commercial house; his health has usually been good. There are no antecedents which

indicate the cause of his sickness; his family history is good, and he has never been syphilitic or intemperate. Four years ago he experienced the same symptoms as to-day; he was kept in bed for three weeks and prevented from work for six weeks more; I add that this man is ordinarily constipated.

Last Sunday night he was taken with violent colic unattended with diarrhœa, for he had gone three days without a movement of the bowels. The pains continued without abatement, with nausea, though without vomiting; at the same time there was fever, headache, prostration, and chills from time to time. In this condition he was admitted to the hospital.

Tuesday morning the patient complained of intense pain in the right iliac region, exaggerated by pressure, radiating to the left and upward, and suggesting peritonitis; there was anorexia, a furred tongue and a high fever heat, which, according to the record, was 104° F. Monday evening, and 103° F. Tuesday morning; the pulse was 110.

The most marked symptom was the pain on pressure in the iliac region; on pressing deeply we also got the impression of a firm, resistant tumor, which seemed to indicate the presence of a deposit of hard fæcal matters; this sausage-shaped tumor occupied nearly the whole of the right iliac fossa; and it is there to-day, more easy to feel than it was then, because the pain has in a measure subsided. This tumefaction, which gives a dull sound on percussion, has not in the least yielded to the castor oil which we gave him on the day of his entrance, and which has already caused three liquid stools; the swelling has a little diminished, but has not disappeared. These told you, the symptoms and their seat—what is probably the nature of the affection?

We have here a tumefaction of the cæcum produced by a lodgment of fæcal matters, and the existence of this condition is quite compatible with the existence of some degree of diarrhœa, for the intestine is not so far obstructed but that some liquid fæces may find their way through. This cæcal impaction has given rise to inflammation, which accounts for the pain, the tenderness on pressure and the febrile symptoms. The inflammation has spread to the peritoneum in the neighborhood of the cæcum. In other words, we have before us a case of typhlitis and perityphlitis.

This formidable intestinal affection was first described and named

by Albert, in 1838, who had occasion to observe a number of cases, and who made a study of the disease.

The cæcum is, in fact, placed in a declinous position, forming a pouch or cul-de-sac which extends downwards from the commencement of the colon, with which it is continuous above. It is therefore easy to understand the tendency of fecal matters which pass into the large intestine to lodge in this sort of blood pouch. This is not all—another anatomical peculiarity explains the facility with which the inflammation propagates itself to the neighboring cellular tissue. In most intestinal inflammations you do not witness this complication, because the peritoneum completely surrounds the intestine, and constitutes a true isolating investment; this is a property common to serous membranes in general. The cæcum, on the contrary, is fixed in the iliac fossa—it rests directly on the cellular tissue, while the peritoneum passes over it, covering only its anterior part and sides; behind the cæcum is attached to the cellular tissue covering the right iliacus muscle. Hence it is that a perforating ulcer of the cæcum enables the contents of the bowel to filter through into the surrounding cellular tissue. Another important point, also, to remember, is the situation of the appendix vermiformis (hollow down to its extremity), and situated at the lowest and most dependent part of the cæcum; we do not know the physiological use of this appendix, but we do know that it is very susceptible of inflammation; the most insignificant foreign body—a cherry-stone, a grape-seed, a fragment of bone, may be enough to cause serious mischief. The appendix may undergo gangrene from prolonged inflammation, become perforated and give rise to serious, if not fatal, peritonitis; in fact, a typhlitis originating in, or extending to the appendix, is always very grave. Purulent infiltration in the neighboring cellular tissue, and sub-acute peritonitis are common consequences of perforating typhlitis.

What are the causes which bring about this inflammation of the cæcum? There is one concerning which there can be no doubt, viz: constipation. It is true that comparatively few of those habitually constipated ever have typhlitis, yet the importance of this factor in the production of typhlitis is undeniable, and an impacted cæcum is always a menace of that affection.

Other causes are foreign bodies which become arrested in the cæcum, e. g.: biliary calculi, balls of lumbrici, etc., then indigest-

ible substances introduced into the stomach, which have lodged in the cæcum, owing to the dependent position of which I have spoken; badly masticated and imperfectly digested articles of food may also effect lodgment in the cæcum and get up an irritation. I knew a case of typhloitis to supervene in a child that on Ash Friday had eaten too freely of tunny fish. Among foreign bodies prone to irritate the cæcum are fruit-stones, and these are the more likely to cause such irritation from the fact that they are the more readily arrested in the appendix vermiformis.

I was called to treat a man who presented all the symptoms of intestinal strangulation, with so great sensibility to pressure that we made the diagnosis of peritonitis; after a series of oscultations in his condition, he died suddenly, and as his disease had presented some rather strange features, and had come on after a hearty meal, I made a post-mortem and discovered, along with a circumscribed peritonitis, a perforation of the appendix with fæcal escape and the usual sequelæ.

The perforation had been caused by the lodgment of a particle of chicken-bone, which I readily found. Authorities have also mentioned, as a cause of typhloitis, a severe chill; they have admitted the existence of rheumatic typhloitis. It is possible that under the influence of cold the circulation in the intestinal vessels may be arrested, and that there may be an inflammation as a phenomenal reaction; I think, however, that this is far from being proved. Cases have also been reported of typhloitis following a violent blow in the cæcal region.

I add that typhloitis is a disease of all ages, though now rare in early life under the age of eight or ten years. A singular fact is its greater frequency in men than in women; out of 73 cases only 19 were women. I know of no reason for this; it can hardly be affirmed that constipation is more common in men than in women.

I shall not dwell on the anatomical alterations. The mucosa is reddened and thickened, the villousities are swollen. There is one lesion of especial significance, namely, the ulceration of the cæcum. The peritoneum also generally participates in the inflammation, which may be simply limited to the part which lines the cæcum or may become general. Lastly, you will find an inflammation of the surrounding cellular tissue—sometimes a simple congestion more or less intense, at other times a suppuration which may be diffuse,

extending down the thigh, infiltrating the soft parts about the hips or loins, or may be limited, constituting an abscess of the right iliac fossa.

The symptomatology of typhlitis is sufficiently characteristic, with certain differences, according as the affection is acute or chronic, simple or complicated with perityphlitis. For several days there may be digestive disturbances, nausea, loss of appetite, coated tongue, constipation. Then the disease declares itself by violent attacks of colicky pain, which disappears momentarily, to return again, and by a more or less severe pain, aggravated by pressure in the region of the cæcum. At this period vomitings may supervene; these consist of nothing but the contents of the stomach, with perhaps an admixture of bile. If there be peritonitis, the vomited matters become greenish or porraceous, and contain much mucus. There is also some fever, which is generally light (110° F.) The pulse oscillates between 105° and 110°; the rise in pulse and temperature go together. Lastly, after two or three days appear important objective phenomena: if you palpate the region which was painful at the start, you will find there a hard, resistant tumor, sometimes limited to the cæcum, sometimes extending as high as the umbilicus. The appearance of this symptom makes plain the diagnosis, for it clearly indicates the arrest of faecal matters at this point. We have had all these symptoms in our patient; he had constipation for a day or two, he has had vomiting and fever, a pain in the right side, and to-day we feel the tumefaction.

What is the ordinary course of this affection? This is a matter of extreme interest. In some cases, after these symptoms have lasted several days the fever falls, the course of faecal matters is re-established, and resolution takes place; all this occupying a period of five, six or ten days, and exceptionally fifteen. There remains, however, almost always a little pain, which manifests itself especially during rapid walking, lifting, or any sudden movement, even when deep pressure is made over the abdomen; there is still a little swelling, which is quite perceptible on comparing the right side with the left; one might say that the tumefaction was disappearing little by little, while leaving traces of its presence behind. We had lately a case of this kind in our wards which terminated by resolution, and twenty days afterward the patient had still pain in the right side.

Unfortunately, this is not the ordinary course. A very grave termination is by peritonitis. The belly becomes very painful; this pain, instead of being limited to the iliac fossa, extends over the abdomen as

far as the umbilicus; there is increase in the pulse, but not in the temperature; porraceous vomiting. A peritonitis localized to the cæcum makes a part of the disease, but in the cases of which I am now speaking it spreads, and even becomes general, and all this in a period of time which is often very short. This peritonitis is still much more grave if it supervenes as a consequence of a perforation, which is a frequent result, as I have before said, of inflammation of the appendix; in a few hours the patient is past all help. I shall always remember an instance of this kind which made a deep impression upon me: it was the case of a child who was one day taken with typhlitis; the symptoms were very well marked; the disease followed its course with intervals of better and worse; and I was hoping for recovery. At the end of a week the child was taken with a severe attack of retention of urine, and at the same time complained of great increase of pain. That very evening I found him suffering from a chill, and with that hippocratic cast of the countenance, that porraceous vomiting, that tumefaction of the abdomen which bespoke general peritonitis, which seems in this instance to have spread from the peritoneum of the bladder. In five hours the child was a corpse. At the moment of its death the abdomen was enormously tympanitic, and several hours afterwards the walls of this cavity were in a state of mortification. There was no post mortem examination, but the succession of symptoms pointed to peritonitis with a perforation of the vermicular appendix. You will be sure to meet with such cases in practice, and you will be certain to have cruel disappointments; you will think that you have to do with only a simple passing indisposition in an individual who has had alternations of diarrhœa and constipation and pains in the belly, and who is all at once carried off by acute peritonitis. Always, then, distrust an inflammation of the appendix; you cannot imagine how latent, how insidious it sometimes is, and what sad surprises it causes. It must, at the same time, be recognized that if the peritonitis remains limited the patient may recover.

A more common and quite as grave complication is suppuration. The inflammation propagates itself to the cellular tissue of the cæcum; you have then a persistent tumefaction, fever, momentary shiverings, or, in other words, the signs of the formation of an iliac abscess. The further evolution of this abscess is variable. It may open into the peritoneum, although this is a rare event. It generally opens into the large or small intestine, and the patient voids pus in the stools. We

have at the present time in our wards a female patient who came there six weeks ago with a pain in the right iliac fossa, which we attributed to a peri-renal abscess; the tumefaction did not appear to belong to the cæcal region. This abscess opened into the intestine, but the patient has not yet got well; from time to time there is a discharge of pus in the stools. In women the abscess may open into the vagina, and cases have been known where it has burst into the bladder, with discharge of pus in the urine. Lastly, it may point externally, over the iliac region, constituting an abscess tumor, with well-marked fluctuation, and may break of itself, or be opened by the surgeon. The pus which flows from it is often very abundant; it is thin and possesses sometimes a pronounced fecal odor. A fistula may remain, the suppuration may continue and wear out the patient.

At other times the pus does not collect, but infiltrates the cellular tissue of the trunk, the abdominal muscles and the loins, and is accompanied with gangrene. We had a striking example of this in what happened to Gambetta, who presented all the symptoms of grave typhlitis and perityphlitis, and at his autopsy there was found in the muscles of the abdomen and the cellular tissue a purulent infiltration; moreover, there was a perforation of the appendix cæci.

Iliac phlegmon, then, constitutes an unfavorable complication, although the abscess may be limited, discharge itself and become healed.

By the side of the acute form we may refer to a chronic form, which consists in a permanent tumefaction of the cæcal region. The induration of tissue which surrounds the cæcum from time to time, gives rise to acute manifestations; the patient vomits and presents the aggregate of symptoms of intestinal occlusion. With a purgative the course of the fæcal matters is re established and the inflammation allayed. If the tumor persists, there is reason to fear cancer or tubercle; the diagnosis in this event cannot generally be a matter of difficulty.

Several years ago I had under my care a woman who every three or four months had all the symptoms which I have indicated; she was always set right by purgatives after four or five days of sickness. The tumefaction persisted. I saw her again after a journey which she had made to England, and found all the signs of confirmed tuberculosis. There had evidently been a sub-acute tuberculous peritonitis of a limited character, which had caused the disturbance in the intestinal functions for which she sought my care.

The course of the disease is very variable. If it ends in resolution, this may be very tardy. Thus our patient, who has three stools a day, keeps his tumor; this tardiness in resolution is evidently the result of the perityphloitis.

Typhloitis is a disease with relapses. Patients who have had one attack generally have a return of the disease sooner or later. Our patient has already had one previous attack. There is in the cæcum an anatomical peculiarity, which, as I have told you, favors the arrest of fecal matters or foreign bodies in this gut.

To sum up, simple typhloitis is comparatively unattended with danger, but the possible complications and terminations made the prognosis gloomy.

The diagnosis does not present much difficulty; the chief elements thereof have been previously enumerated.

The treatment is sufficiently simple. The first indication is to restore the proper action of the bowels; a mild purgative, as castor oil, sulphate of soda, a dose of Seltzer, will generally answer the purpose. You must be on the alert for complications. If there is any peritonitis, apply leeches or wet cups over the abdomen; the former are greatly to be preferred, for obvious reasons. There can be no doubt as to the utility of opiates where the pain continues after the administration of the purgative, or where the purgative fails, and the signs of peritonitis appear. Some have counselled the application of a fly-blister the next day after the leeching.

The strength of the patient must be supported by suitable nutrients, alcoholic stimulants and sulphate of quinine. If fluctuation anywhere makes itself manifest, or any other indication of suppuration, your duty is imperative—the matter must be evacuated by a bold incision. It is better that you should cut down on a peri-cæcal abscess and evacuate the pus, than that it should be allowed to burst into some internal organ, or burrow down the thigh; in any event, unless there be a free external opening to the very seat of the pus, you will be likely to have one of those discharging, fistulous outlets which seldom or never heal up, are accompanied with hectic, and entail all the consequences of progressive exhaustion and consumption.

To sum up, the great danger to be avoided is the supervention of those often sudden and fatal complications which appear in so large a percentage of cases.

CORRESPONDENCE.

A VACATION FOR STUDY—DRINKING AT THE FOUNTAIN'S HEAD—ADVANTAGES TO THE GRADUATE IN MEDICINE IN NEW YORK—PROF. GERSTER—HOW TO TREAT AN ABSCESS—MATERIAL AT THE HOSPITALS—DR. GIBNEY—"NORMAL OVARIOTOMY" THE CORRECT NAME FOR THE MANY LAPAROTOMIES DONE IN NEW YORK—NORTH CAROLINA DOCTORS.

NEW YORK CITY, December 15, 1887.

Messrs. Editors North Carolina Medical Journal:

DEAR DOCTORS:—To the North Carolina country doctor a vacation is a thing to be dreamed of, aye, "a consummation devoutly to be wished;" but alas, an end seldom attained. In truth, if one waits for a fitting opportunity, he will probably never leave off for a day the ceaseless drudgery of professional life, and with nothing to vary the monotony of long drives through the thinly-settled country, the feeling of pulses, the looking at tongues and rolling of pills, with little time of intercourse with his professional brethren, and with scant opportunity of becoming personally acquainted with new drugs and new methods, he is very apt to fall into routine lines of treatment, and forget that medicine is a science as yet almost lacking in fixed laws and with possibilities of achievement almost without bound. True, he may in some measure keep abreast with current medical thought by reading the leading medical journals, and, if his purse will permit, he will from time to time buy some of the countless, oftentimes worthless, new books, which the medical press is issuing in countless thousands, but still, reading does not impress our minds like does the seeing, and though we may, after a sort, believe the declarations of the author after whom we are reading, our ideas are often too imperfect, or we fail to catch the necessary enthusiasm to make us introduce innovations into the practice of our art. Feeling this—feeling that many things I had read of in the JOURNAL and text-books I should like to see executed and myself watch the ends attained, I have for several weeks been in this great metropolis, drinking at the fountain-head; learning much

that is new, and, what is perhaps more important, clearing away the mists of imperfect learning from many other things which before I had been inclined to think I knew very well.

The wonderful resource for the attainment of knowledge open to the graduate in medicine in New York City cannot be realized till one comes to look for oneself. Indeed, the feast is so great, so widespread and so varied, that I think if one comes here to spend a few weeks in freshening up his medical knowledge without some definite line of study in view, he is very apt to be like a gourmand at a feast, who, in his greediness to taste all of the good things spread upon the board, gets no real good from any particular dish, but if the practitioner will come to New York desiring to prosecute some special branch of study, it is wonderful how much real work he can accomplish in a comparatively short time.

For a number of weeks past the writer has been studying, in the New York Polyclinic, Surgery and Gynecology, and it is but the just due of this Institution that he should say it impresses him as offering *the* student-physician better opportunities than any similar Institution in the country. The teaching here is eminently practical, and much attention is given to detail. What one is too apt to regard as the little things in practice, and therefore demanding little attention, are here constantly taught as the most important because the most frequent, and Prof. Gerster, who is a most enthusiastic teacher, declared to the class a few days ago: "Few physicians know how to treat an abscess. Show me the doctor who knows how to treat an abscess well, and when I shall have to submit myself to the risk of a big operation, a capital operation, he shall be the man to whom I will entrust my carcass."

The following clinical note of a case of "felon" is perhaps a fair sample of the care with which cases in minor surgery are investigated and treated in the clinic. The note was taken in the service of Dr. Wyeth, who, *en passant*, is said to be by birth a Southerner, and who is already too favorably known to your readers, through the medium of his very excellent work on surgery, to need any introduction from me: "Gentlemen, this patient presents herself for relief from what seems to be a 'felon.' Three days ago she first noticed a pain in the index-finger near the articulation of the middle and the last phalanges. She tells us the pain was as if the point of a needle had entered and had been broken off. The pain has con-

tinued steadily since that time, and the part is, as you now see, considerably swollen. When held between the fingers it throbs perceptibly, is exceedingly painful on pressure, and she tells us that, in her present condition, sleep is impossible. The condition from which she is suffering may result from a periostitis or ostitis of the phalanx, or it may be only a superficial phlegmon of the soft tissues, but, so far as we are concerned, we do not need in this instance to make a very accurate diagnosis, as the treatment in both conditions must be the same. Originating in the bone, if neglected, the inflammation ultimately invades the soft parts, while, on the other hand, a superficial phlegmon may, if not early incised, produce a destructive ostitis in the phalanx. It is therefore necessary to open either form of phlegmon, be it deep or superficial, and I make it an invariable rule to cut straight down to, and freely incise, the periosteum in order to be on the safe side. Formerly opening a felon was a most painful operation, unless general narcosis was secured by ether or chloroform; now, fortunately, with the hydrochlorate of cocaine locally applied, we can do this without our patient even knowing when the incision is made. We will now place her hand for five minutes in warm 1-3000 sublimate solution in order to render aseptic the part to be incised. The finger is constricted tightly with a piece of rubber tubing as near the metacarpus as possible. In this way we not only prevent bleeding, but hold the cocaine in contact with the tissues to be divided. We now inject the part with cocaine by means of the ordinary hypodermic syringe, and as the point of the needle fairly penetrates the tissues a drop of the solution is pressed out. Almost immediately this point becomes anesthetized, and so the needle is pushed further and further, and the cocaine injected two or three drops at a time as the needle advances, until the length of the incision, as mapped out, is covered, consuming, as you see, about 15 minims of a 4 per cent. solution. If this injection is properly done the pain ceases in a minute and the incision can be made, as I am now doing, at leisure. In making the incision care should be taken to avoid the tendon in the middle line in front or behind for fear of exciting inflammation in the sheath, which might extend into the palm of the hand or along the extensor tendons. The matrix of the nail must also be avoided. It follows, therefore, that we must incise on the lateral aspects of the finger, and by choice over the seat of the greatest inflammation. Be sure,

also, that you divide everything down to the bone and go well through the periosteum, for if you do not the operation will be a failure, but if you relieve the tension on the periosteum and allow the escape of all pus, the bone may be saved. The finger is now again immersed in 1-3000 sublimate and the rubber-tubing removed, As the blood flows out through the wound a portion of the cocaine solution escapes with it, and by pressure on the part in the direction of the incision practically all of the residue is milked out. A strip of sublimate gauze is now pressed into the wound in order to avert bleeding and an antiseptic dressing applied. After twenty-four hours this dressing will be removed and a sublimate poultice employed. The poultice will be made of flaxseed, using warm 1-500 sublimate solution instead of water, as ordinarily done." The work done in the surgical clinic is largely minor because the service is entirely out-door, there being as yet no hospital connected with the Institution, but this work is done in the morning, and each afternoon finds the student well supplied with invitations from the Policlinic surgeons to witness the execution of the major operations at the Mount Sinai and the German Hospitals, and on several afternoons of each week invitations are issued to operative work by the leading surgeons of the city at St. Luke's, the New York, the Bellevue, the Presbyterian and the Roosevelt Hospitals. At all of these institutions the visiting physician is treated as a guest, with marked courtesy, and in the hospitals giving clinics to medical students the best seats are reserved for physicians. Each day one may almost select what kind of operative work he wishes to see, and, looking over his cards of invitation, know just where to find it. The genito-urinary clinic, the course in operation on the cadaver, the practical lessons in surgical dressings are all instructive, but the orthopædic clinic, which is also included in the surgical ticket, deserves more than passing notice. Dr. Gibney, the Professor in charge, will strike the visitor not only as being thoroughly conversant with the subjects he discusses, but one cannot fail to note the affability and genial kindness which characterizes his intercourse with his patients, and which must contribute largely to his success. His patients are chiefly children, and knowing most of them by name, some little pleasantry or some pleasing reminiscence coming from him constantly serves to attract the attention of the little sufferer from the pain of the examination or dressing. In this

clinic one can see, on any one day, almost everything included in orthopædic work, so large is the number of patients attracted by the skill of the Professor. In one part of the room two or more assistants will be applying Sayre's jackets for spinal disease; in another will be demonstrating the use of the splints for hip-joint and knee-joint diseases; and in another are being immobilized by plaster bandages various diseased joints, while in still another the Professor is himself busy lecturing on some subject which he has not already discussed, or explaining to a circle of students something he has failed to make clear to them. One will be attracted, also, by the comparative simplicity and cheapness of the orthopædic appliances recommended, one of the greatest drawbacks in practice often being that patients cannot afford to buy such costly splints as those recommended and invented by Dr. Sayre. In this clinic the writer frequently saw the operations for club-foot, osteotomy for knock-knees and bow-legs, and the free incision of the knee-joint for abscess, the parts operated upon being afterwards dressed antiseptically, immobilized with plaster and the patient sent home. In the Department of Gynecology the material is abundant and the students in turn make the diagnosis and give the necessary treatment, the instructor all the while standing by, making the difficulties of diagnosis plain, and pointing out sources of error. In this course one gets from three to six invitations a week to witness the various operative procedures employed for the repair of lacerated cervixes and perinæums, the extirpation of fibroid tumors and the removal of ovarian cysts, as well as the Tait and Battey operations. In some of the cases of removal of the ovaries the writer witnessed since in the city, he felt that the term "normal ovariectomy," as proposed by Dr. Battey, was the only fitting term, because, though always declared diseased, I oftentimes failed to discover anything wrong in the appearance of the bodies removed, and I am satisfied that just now women are being spayed and mutilated to an extent entirely unwarranted by necessity. During the short space the writer has been in the city he has seen the peritonæum invaded more than twenty times for all sorts of troubles, and has had invitations to probably as many more similar operations which he was compelled to refuse because he desired to see some other work, and—shall I write it?—in New York Laparotomy grows to be rather monotonous. As before said, in the writer's opinion Laparotomy—

a generic term covering every invasion of the peritoneum—has become altogether too general, and is too often resorted to by even the merest tyros in the profession—in one afternoon, recently, the writer saw four Laparotomies—but thanks to strict antisepsis, the mortality is daily growing less. On one occasion that I recall a woman was brought into the operating room in one of the large hospitals for a diagnosis. The abdomen was largely distended, and, after the most superficial examination, the surgeon told her she had ovarian cyst and must be operated on, but when the patient left the room he declared she either had a cyst or ascites, he did not care to trouble himself to know which. That in all cases of ascites in which disease of the liver and kidneys could be excluded, there was usually some local cause demanding operative procedure, and that in a few days he would make an exploratory incision, and then settle the diagnosis. I made a point of being present at the appointed hour. When the incision was made a large quantity of ascitic fluid escaped and the belly completely collapsed, but the operator coolly fished about in the pelvic cavity, and finally brought triumphantly to light a small dermoid cyst of the right ovary in a state of suppuration, and this being removed, the woman went on to a speedy recovery. And so I might write on in this gossipy way, but I fear I have long since wearied you, my dear doctors, and so will bring my letter to a close. In closing, however, you will, I trust, pardon the pride which makes me say my visit here will, if possible, serve to increase my respect for the profession of my native State, for I believe that the rank and file of the medical profession in North Carolina will compare favorably with that of any State in the Union.

These men, teaching in the great hospitals here, are great men and great teachers, and far be it from me to take one jot or tittle from their merited honor, but oh, how great are their opportunities. If a big operation is to be done in New York, the surgeon can familiarize himself with the parts by immediate dissection. He is supported by able counsel, aided by trained assistants, and last, but by no means least, he goes into the operation without feeling if his patient die he will be looked upon as a sort of semi-murderer, for if an unfortunate result follow, it is quickly forgotten in the hurry and innumerable death-rate of the great city. But with us how different! A great emergency arises—a serious operation must be done

immediately, and at best one can rarely obtain more than one professional assistant. Ofttimes the assistant will be a common laborer, the best light obtainable a pine-torch or kerosene-lamp, minus a chimney, and with a paucity of instruments, because too poor to buy a complete outfit, the surgeon gropes his way through delicate tissues till the work is done and the life of his patient is saved. I recall to mind now a case of successful Laparotomy done for gunshot wound of the abdomen, and reported at the last meeting of our Medical Society, in which I am reliably informed the operator had only the assistance of a negro field-hand and worked solely by the light of a pine-torch. And yet, in spite of the difficulties encountered, how splendid is our record! In surgery—herniotomy, lithotomy, ovariectomy, trepanning, everything, almost, in the wide range of surgical work, is constantly being done in our midst, and with a mortality almost nil. And what is true of surgical work is also true of the practice of general medicine in North Carolina—our death-rate is perhaps the lowest in the Union. Then, I know you will feel, with me, that we have just cause for pride and every reason for full faith in the future possibilities of the North Carolina physician.

Very respectfully yours,

R. L. PAYNE, JR., M.D.

HYDRORRHEA GRAVIDARUM—COMPLICATING MULTIPLE PREGNANCY.

I was called December 2d to see Mrs. C., three miles in the country. On arriving was met by the husband, who informed me that his wife was in labor, the "bag of waters" having broken in the early morning.

My patient excitedly informed me that she lacked four or five weeks of completing her full term of utero-gestation; but to this I gave no credence, as I have more than once had my services engaged for a set time in similar cases, and then for four or six weeks had to live a life of expectancy. Upon examination the os was found undilated and non-patulous. There was, however, a profuse watery discharge from the vagina, but the pains were quite feeble and ineffective, and gradually ceased altogether.

I left my patient for three hours, and returning found her perfectly quiet and everything normal with the exception of the hydrorrhœa, which persisted. Being satisfied that my patient was not in labor, and that I had to deal with an hydrorrhœa, I told her she required no immediate treatment and was in no danger, and left with instructions to call me as soon as the signs of commencing labor were manifest.

Between December 2d and January 21st I saw her several times, the discharge continuing throughout this period of time. Was called January 21st and found her in the first stage of labor.

As soon as the os was sufficiently dilated to allow the "obstetric finger," breech presentation and left sacro-anterior position was made out. The membranes were ruptured, labor progressing nicely, and very soon a male child was delivered. The labor was perfectly dry, not a drop of fluid passing during the two stages, and the skin of the child was not covered by its own natural secretion, the vernix caseosa.

Before the second stage of labor was completed, by palpation, a second child in-utero was clearly defined. Having waited about thirty minutes, the pains returned and the bag of waters soon presented and were ruptured, with the escape of a large quantity of liquor-amnii. Same presentation and position as in the first delivery. Labor progressed nicely and a second child male child soon delivered. The secundines soon followed. By examination a common placenta was found, with cords separately attached. From external appearances there was but one complete bag of membranes, with intervening septum; but dissection revealed a common chorion, with distinct amnion reflected from the peripheral aspect of the placenta to its centre, and thus uniting to constitute the septum. From whence came this hydrorrhœa? It could not have been a transudation of liquor-amnii through the membranes, nor derived from the space between the chorion and amnion, for the hydrorrhœa was too profuse (frequently coming with a gush) and too persistent, continuing for near a month.

In Burgess' and Dubois' theory of laceration of the membranes we can harmonize all the facts in the case. The profuse and continued flow, the perfectly dry labor in the first instance, the membranes being prematurely ruptured, and the dissection, all point to a laceration of the fœtal membranes as a cause of the hydrorrhœa.

J. A. FAISON, M.D., Mt. Olive, N. C.

SELECTED PAPERS.

IODOFORM AND IODOL.

The good effects which have followed the surgical use of iodoform have led to a series of investigations of its influence upon the lower organisms with results that are apparently at variance with previous surgical teachings. The matter is one of such importance that, although we have noted from time to time these researches in the *Therapeutic Gazette*, it has seemed to us that a leader on the present state of the subject would not be amiss. In November, 1886, Dr. De Ruyter announced at a meeting of the Berlin Surgical Society that the powder of iodoform has little or no effect in preventing the development of bacteria, and that when it is mixed with rapidly-infective bacteria, like those of anthrax and of various forms of animal bacteria previous to inoculation, it does not sensibly influence the development of the disease. This has been confirmed experimentally by Kronacher (*Munchener Med. Wochen.*, volume xxxiv., 1887, p. 546), who employed the bacteria of erysipelas and of anthrax; also by Baumgarten (*Berlin Klin. Wochen.*), who further found that iodoform powder mixed with tubercular bacillus in cultivating apparatus did not prevent its ordinary development, and that the bacillus mixed with iodoform powder, introduced into guinea-pigs and rabbits, produced rapid tuberculosis; also by Dr. Lübbert (*Fortschritte der Med.*, Bd., 5, 343) with *Staphylococcus pyogenes*; also by Drs. Chreyn and Thorkil Drovsing (*Fortschritte der Med.*, Bd- 5 p. 33), who found that the iodoform had no influence upon the development of *Staphylococcus pyogenes*, or upon the coccus of pneumonia, or upon the bacillus subtilis and other organisms, and conclude that it is not only worthless as an antiseptic, but may even be the means by which the septic organisms may be carried into the system; also by Dr. Johan-Olsen (*Norsk Magazin Legevidensk.*, 1886), with various bacterial organisms; also by Könige (*Therap. Monatshefte*, April, 1887). On the other hand, Dr. H. Sattler (*Fortschritte der Med.*, Bd. 5, 362), in his experiments, found that when he impregnated threads with iodoform and micro-organisms, and then placed them in a culture-apparatus, the

iodoform had a very distinct effect in checking the development of the bacteria, and De Ruyter states that if, instead of using the iodoform powder, he employed an ethereal solution of iodoform in which decomposition of the iodoform had already commenced, there was a distinct effect upon the organisms. In a further series of experiments De Ruyter showed that iodoform is decomposed by blood, serum and other organic fluids in which micro-organisms are growing, and apparently established that the decomposition is produced by the ptomaines developed by the growing organism.

A curious fact made out by Baumgarten is, that rubbing the bacillus of anthrax with any hard powder, apparently mechanically, kills the organism.

The clinical results achieved by surgeons are concordant and decided as to the practical value of iodoform in the treatment of wounds and ulcers. It is possible that a part of the good influence of the iodoform is due to a specific effect upon the tissues themselves. Further, the powder of iodoform may have a very distinctly protecting power mechanically, and by the dryness of the wound which it causes, the discharges from the wound being the especial soil in which the bacteria develop. In certain cases, especially in tubercular diseases, iodoform appears, however, to exert an influence greater than can be accounted for by an indirect action. Many clinicians bear strong testimony to the effect of iodoform on tubercular ulcers of the larynx and other organs. Professor Bruns (*Therap. Monatshefte*), May, 1887) relates fifty-four cases of cold tubercular abscess treated by evacuation through aspiration and a subsequent injection of a ten per cent. mixture of iodoform, glycerin and alcohol, with closure of the orifice, made by the needle, by means of the iodoform collodion. Of fifty-four such cases, forty were healed, many of them as the result of a single injection. For the purposes of study some of the abscesses were opened, and tubercular bacilli were found abundant in their walls. According to Professor Bruns, the first change which results from the iodoform is the disappearance of the tubercular bacilli and the appearance of normal granular tissues. In De Ruyter's experiments, already quoted, the products of the decomposition of iodoform distinctly checked the growth of organisms, and it is at present most probable that some of the goodly results achieved by iodoform as a

topical application are the result of the long-continued antiseptic influence of the iodine compounds liberated by its decomposition.

A great objection to iodoform, especially in private practice, is the odor, for the prevention of which a number of suggestions have been made; none of them, however, of any real value. The use of iodoform in venereal diseases has become so common that the public now associate it with this class of diseases almost as closely as they do oil of copaiba and mercurials, and patients sometimes refuse to have iodoform about their persons for fear of creating suspicion as to the nature of their complaint. Further, the number of cases of poisoning by the absorption of iodoform from surgical dressings is really quite large, so that a substitute is a great desideratum. It at present looks as though such a substance may be found in iodol, although at present its cost greatly restricts its use. It is free from odor, has similar physiological properties to iodoform, and yields by its slow decomposition the same products as does iodoform. It has been asserted to be entirely free from toxic influences. If this were true it would not fully represent iodoform, but the experiments made by Marcus and by Pahl (Inaug. Diss., Berlin, 1886) show that when given in sufficient doses to animals it causes emaciation, albuminous urine, fall of temperature, general loss of muscular power, and, finally, death from fatty degeneration of the liver, kidney and other tissues. Moreover, in a case which has already been published in the *Gazette* (see vol. xi, p. 768), iodol caused, when used as a surgical dressing, symptoms of severe poisoning. The symptoms and post-mortem results which it produces are precisely those produced by iodol. As long ago as 1886 Pick asserted that it is absorbed much less freely than is iodoform, and this has been confirmed by the experiments of Seifert, who found that when he took $7\frac{1}{2}$ grains of iodol, iodine did not appear in the urine until after twelve hours, and did not reach its maximum elimination for eighteen hours. It would seem, therefore, that iodol is less poisonous than iodoform simply because it is much less freely absorbed. It contains nearly as much iodine as does iodoform, one hundred parts of it containing eighty-eight and nine-tenths parts of the haloid, and one hundred parts iodoform ninety-six and seven-tenths parts; its local effect is as active as that of iodoform, and it has been employed for all the purposes for which iodoform has been used, and found especially efficient in the treatment of tubercular laryngitis. Thus,

Lublinski (*Deutsch. Med. Wochen.*, 51, 1886) had a number of cases of tubercular laryngitis in which throwing pure iodol into the larynx either daily or weekly produced the most favorable results, without causing irritation. He also used it in ozæna with similar good results. Dr. Otto Seifert (*Münchner Med. Wochen.*, 1887, p. 53) states that he had many times seen symptoms of marked constitutional disturbance follow the local use of iodoform in tuberculosis of the larynx, but has never yet seen any local or constitutional trouble with iodol, and in one case, in which he was able to make a prolonged treatment, he obtained first a definite cure of a tubercular ulceration on the right vocal cord through the employment of creasote-glycerin and iodoform and boracic acid, and then a complete healing of the left vocal cord by iodol blown into the larynx. In cases of rhinitis atrophicans patients were improved, but not cured. The absence of odor and the non-irritating property of iodol fit it especially for use in these cases. The action of iodol in tubercular laryngitis has also received the very strongest commendation from Dr. R. Norris Wolfenden, who prepares a pastille from one grain of iodol, one minim of glycerin and eighteen grains of glyco-gelatin. Mazzoni, who first proposed the use of iodol in practical medicine, employed a solution composed of iodol, one part; alcohol, sixteen parts; and glycerin, thirty-four parts. One drachm of iodol forms with one ounce of ether a clear brown solution, which may be applied by the sprry or brush to nasal or other mucous membranes or to the surfaces of ulcers, and soon evaporates, leaving behind a coating of the iodol. Iodol has also been used in internal medicine. Its effects in tertiary syphilis have been stated by Assaky to be most extraordinary. The dose usually employed has been 2 or 3 grains a day, but both Pick and Assaky have given as high as 30 grains a day without injury.—*Therapeutic Gazette*.

LEDGER of Monthly Balances and Index of Accounts is the companion of the *Medical World's* visiting list, and it seems to us admirably adapted for the orderly management of accounts, by the simple means of a small pocket-book ledger, making it possible to keep up accounts on the spot and avoiding the more bulky methods.

THE PREPARATION OF FOOD FOR THE SICK.

The preparation of food for the sick is a matter of such importance that, although the subject is trite, we scarcely think an apology is necessary for devoting a leader in this early number of 1888 to the discussion of the preparation of soups.

In making a beef-tea the round of a good piece of beef should always be selected, and cut into small cubes not larger than half an inch in diameter. It should then be put to soak for two hours on the back of the range, in an earthen-ware pipkin, with one pint of cold water, and allowed to simmer for about fifteen minutes and boil for three minutes. After adding half a teaspoonful of salt and a little pepper, the tea is ready for use.

In the preparation of soups the first thing is the making of the so-called stock or basis for the soup. There are two distinct stocks: one which may be known as the brown stock, the other as clear, or *consommé* stock. For the preparation of brown stock take four pounds of shin of beef, four quarts of cold water, ten whole cloves, four pepper-corns, a bouquet of herbs (sweet marjoram, summer savory, thyme and sage), one tablespoonful of salt, three small onions, one turnip, one carrot, two stalks of cellery, two sprigs of parsley. Cut the meat from the bones, after which place the bones and half of the meat in a soup-kettle and allow to stand for half an hour in cold water. Heat gradually and allow to simmer for six or seven hours. Brown the remainder of the meat in two tablespoonfuls of beef-drippings, and add with the other meat and with the vegetables chopped fine, when the kettle is put on the fire to simmer. After it has simmered the required time, the stock is strained and set aside to cool, the fat being removed from the top. The stock is then ready for use.

Out of the brown stock may be made St. Julienne soup by the following process: In making these soups the stocks must never be allowed to boil, or at most must be brought only for a moment to the boiling-point. For St. Julienne put one pint of the brown stock on the fire to heat, after which a pint of finely-chopped vegetables (turnip, carrot, etc.), with half a teaspoonful of salt, should be put on with a little water to parboil. This being done, add the vegetables to the stock, season with half a saltspoonful of pepper. Vermicelli soup is made by adding half a cup of vermicelli to a pint of the brown stock. Cook the vermicelli for ten minutes in salted boiling water, season

with a half-teaspoonful of salt and a half-saltspoonful of pepper, and add to the warm stock.

Consommé stock is to be made in exactly the same way as the brown stock, except that three pounds of the knuckle of veal are to be added to the meat and all the meat is to be put in at once without browning. After the stock has been formed, in order to clear it add the white and the shell of one egg, the juice and rind of one lemon, beating them all up together; then put on the fire, bring to the boiling-point, strain through a sieve and again through a napkin, without pressure or squeezing, and serve.

For making chicken-broth, take three pounds of chicken well cleaned, cover with cold water, boil from three to five hours (until the meat falls to pieces), strain, cool and skim off the fat. To a pint of this add salt and pepper and two tablespoonfuls of soft rice, which has been previously thoroughly boiled in salt-water; bring the broth to a boil. In preparing the rice half a cupful should be boiled for thirty with a teaspoonful of salt in a pint of water. To make mutton-broth, take one pound of lean, juicy mutton, chopped fine.—*Therapeutic Gazette*.

IPECAC IN MINOR HÆMORRHAGES.—Dr. Holmes, in the *Mississippi Valley Medical Monthly*, gives his experience with ipecac in the relief of minor hæmorrhages. Twenty-grain doses are given, and, as nausea comes on bleeding ceases. Further observations on this point can be easily made, and will soon be forthcoming.


ANTIFEBRIN IN PHTHISIS.—Antifebrin is reported to be valuable in phthisis. Patients who are weak and have old-standing and still progressive disintegration of tissues should be given from one to two grains. In doses of three grains to patients, as above, it causes profuse perspiration and perhaps rigors. The lowering of the febrile temperature begins in an hour after administration, reaches its maximum in three or four hours, and lasts from six to eight hours. In patients whose general state is pretty good the doses may be larger than stated above (say three to five grains), and may be repeated when a re-elevation of the temperature occurs later on.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C., }
GEO. GILLET THOMAS, M. D., " } Editors.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE REPORT OF THE CITY HOSPITAL FOR 1887.

We have received the report of the above Institution for 1887, the completion of the sixth year of its existence. We give some of the gross statistics from the report. There were 41 white males, 29 white females (charity patients)—total, 70; there were 54 colored males and 23 females (charity patients)—total, 77. Of pay patients there were 35 white males, 5 white females, 1 colored male—total, 41. This gives a grand total of 188 patients. The diseases covered a broad range, twenty of them being surgical, the rest medical. There were 19 deaths, of which 3 were white males, 13 colored males, 3 colored females, consumption leading as a cause of death, claiming 5 victims,

dropsy claiming 3. The total number of days for which relief was afforded was 6,426.

Dr. W. W. Lane the efficient Superintendent and Surgeon in charge, has been at the head of the Institution from the first day of its existence, and has assiduously and wisely done his part in shaping the course of the Institution, surrendering his general practice, and making this one object the work of his life, and we congratulate him that he has lived to see so much of the fruit of his labors. He makes in his report to the Board of Hospital Managers some suggestions which we trust they will see put into execution. Among them he shows that the wards for pay patients should be increased and improved, as there is a decidedly increasing desire on the part of the sick from the surrounding counties to seek help in the Institution. A few rooms are available for such patients, and this is one of the obstacles to be overcome. Another is the lack of trained nurses. The few nurses now on duty are overworked, and convalescents are utilized for the duty, and such service is usually unsatisfactory. We have urged before, and we again urge it upon our educated young women, that this field is honorable, useful, and far more lucrative than the usual avocations in which they seek a livelihood. The nurse department must be provided for more effectually by the managers, and at once. The wards for colored patients must receive early attention, and the sexes and colors entirely separated, as has been the practice heretofore. In no other way can complete discipline be maintained.

If suitable buildings were provided a training school for nurses could be made a feature of the Institution, but this end must be accomplished by the benefactions from a generous public. This desideratum is not very remote, we believe, as the best educated and most philanthropic of our citizens are evincing a deep interest in the work done. Dr. Lane is cheered by the sympathy and active good works of a few constant ladies and gentlemen, who visit the hospital regularly. These friends will increase year by year.

Dr. Lane also remarks upon the cordial support he is getting from the profession of the city, and he is right in saying that these gentlemen approve heartily of the improvements he has suggested. These gentlemen have freely given their professional services, and are now giving them, and we believe that their earnestness in the success of the Hospital has added largely to that end. The managers will therefore see the propriety in conceding some of the very reasonable requests

which they offer in conjunction with the Surgeon in charge. We have heard it intimated, and it seems to us reasonable, that a city that is rich enough to subscribe \$250,000 to railroads as a bonus to secure the trade they may bring, could well afford to plant a few thousands in this Hospital, which has already yielded good fruit, at a very insignificant expense. We are almost certain that there is no hospital in the country that is conducted at so small an expense as this one, but we must emphasize the fact that this economy has been at the expense of many needful things. The stage of experiment is now passed, with this Institution, and the day of permanent success has dawned; let not that success be dimmed by false economy on the part of the business managers, and the medical work will show results which will greatly exceed the good record already made.

SWEET POTATO ALCOHOL.—*Scientific American Supplement* quotes from the *European Mail* some specific statements of the economy of manufacturing alcohol of a superior quality from sweet potatoes. Indian corn is its only rival as regards cheapness, but it takes 714 pounds of corn to yield 22 gallons of alcohol, whereas it requires only 419 pounds of sweet potato flour to make the same amount. The alcohol from sweet potatoes is represented to be of a superior quality. The whole of the eastern part of North Carolina yields superior sweet potatoes, and the experiment of converting crops into alcohol is worth trying.

ACIDULATED BI-CHLORIDE OF MERCURY SOLUTION.—As solutions of the bi-chloride form insoluble compounds with albumen, to obviate this it is proposed by Laplace (*Br. Medical Journal, Deutsche Med. Wochenschrift*) to add diluted hydrochloric acid (5 to 1,000) to the bi-chloride solution (1 to 1,000), whereby the antiseptic power of the latter is greatly increased. Similar results are obtained by adding tartaric acid—1 part of sublimate, 5 parts tartaric acid, and 1,000 of distilled water. The bandages and gauze are wrung out in a solution 5 parts of sublimate, 20 parts tartaric acid, distilled water 1,000 parts.

REVIEWS AND BOOK NOTICES.

THE RULES OF ASEPTIC AND ANTISEPTIC SURGERY: A Practical Treatise for the Use of Students and the General Practitioner. By Arpad E. Gerster, M.D. Illustrated with 248 Engravings and 3 Chromo-Lithographic Plates. New York: D. Appleton & Co., 1888. Price \$5.00.

If ever there was a timely book written this is it. Medical literature has been in a state of great but confused activity in consequence of the radical innovation of what may be termed, in short, Listerism. All these shadowy theories, vacillating processes, laudation of perfect antiseptic agents, warm controversies as to causative bacteria, and innumerable items which are included under the head of Listerism, have been reduced to practical principles in this great work, and elucidated by cases. What Sir Thomas Watson's *Practice of Physic* was to the student of practice, and Sir Benjamin Brodie's lectures on *Clinical Surgery* were to the student of surgery, Dr. Gerster's work is to the student of to-day, with this marked difference, that the latter author has brought to bear a far greater armory of facts, as he has by far a greater range of principles to elucidate.

In his preface the author says: "To a large number of medical men the aseptic and antiseptic methods present incongruous chaos of seemingly contradictory and often incomprehensible detail, arbitrary and varying, according to the predilections and whims of this or that teacher. Yet the principle involved is based on correct observation of a common biological process—namely, that of the decomposition of organic substances. The well-known methods employed since the earliest dawn of civilization for the preservation of organic, especially animal, substances, are based upon the empirical yet correct appreciation of the causes of putrefaction, and the practical adaptation of these methods to the healing of operative or accidental wounds contains the whole essence of the new surgery." This is the key-note of the principles which are so graphically enforced by illustrative cases. The opponents of Listerism can no longer accuse such adherents as Dr. Gerster with Miss-Nancyism, on the contrary, will become willing converts to a system which is rational and capable of the widest application.

Listerism is not a greater innovation than the way this book is made. The stock engravings, which have become venerable by their very respectable associations for half-a-century, have been utterly discarded, and in their stead process engravings from photographs by Kurtz look out from the beautiful clear pages with a freshness that is remarkable. We have not the pleasure of a personal acquaintance with the author, but we are assured that his face seldom appears in the groups figured at the different operations illustrated, and, as far as possible, all faces are eliminated from the photographs, only enough showing to illustrate the technique of the operations. A little closer inspection is necessary to make out the details than in a wood-cut, but the effect is characteristic, and many times striking.

Chapter I. discusses the sepsis and antisepsis, and this is followed by general remarks on aseptic wounds and aseptic treatment, with rules of surgical cleanliness, which goes into special directions as to the *Hands* of the operator, the *Instruments*, *Wound irrigation*, *Sponges*, *Materials for Ligatures and Sutures*, *Drainage-tubes and Elastic Ligatures*, *Disinfecting Lotions*. The notes, in small type, which are interspersed in the text, are valuable crystals of experience, which by themselves are worth the price of the whole volume. After all, the paraphernalia of the surgical operating are described, then comes the practical application of rules.

Chapter III. gives special rules for treating soiled wounds, and the quotation of a sentence under this head will give the reader a hint of the positiveness of the manner of the author: "Extensive, or even superficial, examination of an accidental wound by probing or digital exploration in the street, on a train, or in a railroad station, or in a drug shop, is strongly to be condemned, as it almost necessarily exposes the wound to unavoidable infection. Meddlesome and untimely surgery of this kind smacks of ostentation, is unnecessary, and in many cases positively more dangerous than the injury itself." * * * "As a matter of fact, it may be safely assumed that an examination by probing or digital exploration, performed on the filthy floor of a public place or a street pavement, by the most experienced, cannot be, and is not, cleanly or aseptic. It is extremely dangerous, unnecessary, hence culpable." Further: "The fate of a fresh wound is determined by the views and training of the physician who first attends to it. * * * If his first attendant be one of the still numerous band to whom wound infec-

tion by dust or filth adherent to hands or a probe be a myth, woe unto him !”

The chapters on the Natural History of Idiopathic Suppuration, and the Diagnosis and Treatment of Phlegmon are full of the most important principles and practice which can engage the attention of the surgeon, and the lessons here laid down well learned will bring success in many an otherwise hopeless case. One cannot read these pages without being impressed that here we have something weighty to learn, and to take courage for many a case that otherwise would fill him with gloomiest forebodings.

We need say nothing more of this volume than we have already said, to assure our readers that it is one of remarkable value. If it has its equal anywhere we are not aware of it. If anything is needed to make the author's reputation this book will do it, as it will most surely find its way into every town, village and hamlet in our broad land.

The paper is very fine, but has a glaze rather objectionable to some of our elderly friends; its *tout ensemble* is such, though, that the New York press can no longer deserve the reproach that we have often heard breathed, after handling the manufacture of a rival city.

If the successful candidate before the Board of Medical Examiners at Fayetteville does not select ‘Gerster on Aseptic and Antiseptic Surgery’ as one of the volumes so generously offered by Messrs. Appleton, as published in our last issue, he will not have us to blame.

A MANUAL OF MEDICAL JURISPRUDENCE WITH SPECIAL REFERENCE TO DISEASES AND INJURIES OF THE NERVOUS SYSTEM. By Allen McLane Hamilton, M.D. With Illustrations. E. B. Treat, 771 Broadway, New York, 1887. Pp. 390. Price \$2.75.

The title page explains the nature of the volume. It is divided into eight chapters—Insanity, including its definition and classification, and general considerations, and in the second chapter the legal relations of insanity. The case of Guiteau is presented in a clear and honest manner, and will be read with interest, even by those who followed all the details of the disgusting trial as dished up for us for weeks in the daily papers.

The examination of patients on criminal trial as to alleged

insanity is given in some detail under the heads—Examination of Patient—Tardieu's Formula, Physical Tests, Duties of the Medical Expert, which is followed by some observations on the Tricks of Counsel. The whole subject of insanity is concluded by a number of illustrative cases. Nearly one-half of the volume is devoted to this important subject. The other chapters are—Hysteroid Conditions and Feigned Diseases, Epilepsy, Alcoholism, Suicide, Cranial Injuries and Spinal Injuries.

We have read this volume with interest and instruction. Its author is already well known by his systematic treatise on Diseases of the Nervous System, and this contribution to medical jurisprudence will be very helpful to the unfortunate doctor who is called into court to testify in cases of insanity, etc., and it would serve a most excellent purpose to that other class of persons who are so willing to volunteer testimony, but unfortunately, we fear that such men are not much given to drinking from the wells of wisdom that others dig.

PHOTOGRAPHIC ILLUSTRATIONS OF SKIN DISEASES. An Atlas and Text-Book Combined. By George Henry Fox, A.M., M.D. New York: E. B. Treat, 71 Broadway.

Five years ago the first edition of this work appeared. The representation of diseases of the skin from the actual subject by means of the photograph was then an innovation, but since then Fox's photographs have become known the world over for their excellent qualities. This edition comprises many new plates which substitute illustrations that were not up to the standard—Bierstadt's artotype process, which is as nearly as possible a perfect one, as it is permanent, and these are colored by hand by Dr. Gaertner. The result is a faithful portrait, and one that will bear inspection under the magnifying glass. The case of variola, which represent the discrete form on the hands, arms and chest, is brought out beautifully by a magnifying lens, giving at once all the diagnostic features. Varicella is given side by side in the same faithful portraiture, expressing more than pages of text could do.

We are in receipt of Parts I. and II., containing portraits of Seborrhœa, Erythema Multiforme, Erythema Bullosum, Varicella and Variola in the first part, and in the second Urticaria, Urticaria

Pigmentosa,, Dermatitis Venenata, Dermatitis Calonica, and Eczema Erythematosum.

The volume will be completed in twelve parts at \$2.00 each, containing each four plates with four pages of text to each. The work is sold by subscription, and will be issued monthly. As we have said before, there is no work to be obtained at such a price that is as valuable an aid to diagnosis as this, and the country doctor will find that his money is well spent who invests in a subscription for it.

THE HEALTH OF NATIONS: A Review of the Works of Edwin Chadwick, with a Biographical Dissertation by Benjamin Ward Richardson. Two volumes. Pp. 377 and 440. London: Longmans, Green & Co., 1887.

Few sanitarians who are in constant practice of sanitary principles, and whose duty it is to indoctrinate communities with them, are little aware how much they are indebted to the brains of one man for the origination of such a large part of them. Dr. Richardson, so well known in this country as the author of various works in the interest of sanitary progress, has achieved a worthy object in giving this review of the life and works of Edwin Chadwick. We learn that he was born at Longsight, near Manchester, England, in 1800. He studied law and was admitted to practice. His earliest writing was on the subject of life insurance, which was followed by other economic questions, which, while interesting chiefly to Englishmen, was the beginning of the study of questions which have since been profitable to all civilized nations. One of the chief questions which occupied his thoughts for many years was the "Suggestion for Half-Time Education," that is, a scheme to protect young pauper apprentices employed in factories from the injurious effects of great overwork, and to substitute a few hours each day for instruction in school. This effort was begun in 1824, and the act springing from it became a law in 1834.

At the suggestion of Chadwick, in 1838, the first Sanitary Commission was formed, to inquire into the cause of a severe outbreak of disease in the east end of London, due to a large and stagnant pond. The report of the commission was so thorough that it caused to be established a continuous method of research of the same

order, and the reports became texts in sanitation, as many as seven thousand being distributed.

About the date of this commission he conceived the plan of the Registration of Deaths for the United Kingdom. He also urged the suggestion of taking the census once a year instead of once in ten years. At the suggestion of Chadwick, Dr. William Farr was placed in charge of the Registration, and held the post for nearly fifty years. The tables built up by his work became the basis of calculations of the prevalence of epidemics, the value of lives, the relationships of diseases to seasons, the geographical distribution of disease. The first volume is devoted to a review of the work of Mr. Chadwick, as taken from the large library of printed and unprinted volumes left by him, and comprises a surprising number of topics, some of which we give: "The Value of Life," "Life as a Commercial Problem," "Value of Life in Prisons," "Days of Sickness Among the Masses," "Dietaries Sickness and Mortalities," "Registration of Births, Marriages and Deaths," "Taxes on Knowledge," "The Suppression of Intemperance," "Practical Remedies for Intemperance," "The Development of Statesmanship as a Science, by the Investigation of the Phenomena of State Necessities," "The Physiological Limits of Labor," "Education of the Agricultural Classes," "The Economics of Education," "The Intractable Child," "On Construction of Schools," etc. This array of subjects would show what a broad grasp he had of what we now give the name of public health, which was conceived or worked out by the brain of one man. But this is not all. The second volume is devoted to Preventive Science, and among the subjects treated we select the following: "The Sanitary Condition of the Laboring Classes," "Defects in Sanitation—Leading Remedies," "Use and Application of the Sewage of Towns," "Water and Health," "Land Drainage and Health," "Overcrowding in Private Houses," "Disposal of the Dead and the Formation of Public Cemeteries," "Separate System of Town Drainage," "On the Prevention of Epidemics," and several other items under the general head of Prevention of Pauperism and Crime.

Many of the above topics, very, very old in England, and in some of the densely populated centres in this country, are little known to us, but are the coming questions for us and the succeeding generations. If sanitary wisdom were cumulative and transmissible it

would be a happy prospect for our future, but unfortunately we are only drifting along into the mistakes for which such books as the one before us are written to prevent, and will only awake and cry lustily for remedies when we are seriously entangled with the difficulties. The works of Edwin Chadwick indicate what a debt of gratitude we owe to the English people for economic teaching of all sorts, and make us long for the day when the political aspirant for office could base his fitness upon his knowledge of the topics herein treated.

The history of the growth of sanitation is the history of our civilization, and how can the man who is ignorant of it be competent to make laws for the people?

The work has a frontispiece portrait of Mr. Chadwick, which impresses one with the idea of immense intellectual force.

CONTRIBUTION TO THE STUDY OF THE HEART AND LUNGS. By James R. Leaming, M.D., etc., etc. E. B. Treat, 771 Broadway, New York. Price \$2.75.

This book is a collection of papers prepared at different times by their able author, and now brought together for the first time. The papers are in the first division of the volume on the lungs, in which the physiology of normal respiration and the pathology of pneumonia and pleuritis are discussed with clearness and independence. In some of the papers we notice a lack of finish and completeness, a lapse in the progress of study, showing, perhaps, difference in date of production.

Although the author reiterates certain matters connected with the physiology of respiration and circulation, his theory of respiratory murmurs is exceedingly convincing, and the subject matter is stated in a very interesting and instructive manner.

The second division of the volume treats of cardiac murmurs and disturbed action of the heart. The teaching of Dr. Leaming in regard to cardiac murmurs is very satisfactory, and is shorn of much of the mystifying verbiage employed by so many otherwise good teachers who essay this difficult subject. He gives us much of the valuable practical matter first set forth by Dr. Cammann. He calls attention particularly to what he designates as Cammann's area, viz: the true mitral regurgitant murmur is only heard behind,

to the left of the spine, and near it, with maximum intensity between the seventh and eighth vertebræ.

He summarizes the four natural diagnostic areas on the chest wall. The aortic obstructive, the aortic and the regurgitant have the aortic orifice as a point of union and departure, and Cammann's area of mitral regurgitant murmur, between the seventh and eighth vertebræ, are fixed and practically invariable. The mitral non-regurgitant or intra-ventricular area, may be more or less changed by dislocation of the heart, which is frequently the case.

The third division considers the therapeutics of chloride of ammonium, calomel and thuja occidentalis (*arbor vitæ*). We share with the author in his enthusiasm for the two former remedies.

We find very much that is valuable in this volume, and when it comes to be revised and brought up to the date of the foot-notes appended to some of the subjects, it will be still more acceptable.

HEALTH LESSONS: A Primary Book. By Jerome Walker, M.D.

Dr. Walker has done a difficult task well. The demand is for a text-book on hygiene which will embrace enough of the elements upon which to found the inculcation of good habits of personal hygiene and morals. Good teachers believe hygiene serviceable. We are sure they have generally undertaken too much or too little, and the instruction has not fallen to the lot of men experienced in teaching, or too prone to the free use of the "horrid example" of the professional temperance lecturer. With Dr. Hunt's admirable work for advanced scholars, and *Health Lessons* for beginners, the long-felt want, is at last supplied, and we commend both books to our Superintendent of Public Instruction.

THE BROOKLYN MEDICAL JOURNAL. Edited by Joseph H. Raymond, M.D., Alex. Hutchins, M.D., Joseph Hunt, M.D., Glutworth Hunt, M.D., Fred. D. Bailey, M.D., Editorial Committee of the Medical Society of the County of Kings.

The above named journal, Vol. I., No. 1, has a hearty welcome to our office. Its editor-in-chief is well known to us as an earnest active physician and sanitarian. With his ability and energy and the hearty coöperation of an able staff, Brooklyn will have a first class medical journal. The beginning is auspicious, as we believe, with the exception of *Gaillard's Medical Journal*, there is no

monthly journal in the twin sisters, and in the disappearance of the monthly journals there has been a notable absence of good literary flavor in the otherwise excellent medical periodicals of that region

TRANSACTIONS OF THE AMERICAN OPHTHALMOLOGICAL SOCIETY.

Twenty-third Annual Meeting, 1887, New London, Connecticut.

This volume of transactions is well worthy of the Society from which it emanates. It is beautifully printed, and the illustrations for the most part are of the better sort. The frontispiece is a heliotype of Dr. Ezra Dyer, of Newport, R. I., one of the founders of the Society. His kindness to wounded Confederate soldiers brought into Philadelphia shows that he was a true physician, and doubtless the poor fellows who got their wounds cleansed and dressed and the cup of cold water, will long remember him. The Society consists of one hundred members, but there are very few from the South.

THE MEDICAL WORLD VISITING LIST; being a Daily Record of Practice and Accounts.

This is a new plan of medical account-keeping, requiring only the space of a visiting list, having removable tablets that monthly changes can be made easily. It seems to be very practical, and is decidedly compact. For further information address the *Medical World*, 1520 Chestnut Street, Philadelphia.

PHARMACY STUDENTS IN PHILADELPHIA.—We note that Augustus Bradley, of Tarborough, Charles B. McKeel, of Washington, Charles B. Miller, of Goldsborough, Thomas R. Southerland, of Wilmington, G. H. Macon, of Warrenton, James H. Bunting, of Wilmington, E. D. McNair, of Tarborough, and perhaps others, are in the classes of the Philadelphia College of Pharmacy, an indication of the higher education which is being sought after by the students of pharmacy from our State. This old school does good work, and we are pleased to see that our young men are awake to its advantages.

MONOGRAPHS OF THE DAY.

Exclusion of Epidemics by Quarantine. Report of the Committee of the College of Physicians of Philadelphia.

"The National Control of Maritime Quarantine" is the leading feature of this report. The Committee speaks with favor of a uniform system of State and national quarantine. It is very desirable that there should be a uniform standard, but North Carolina, and perhaps all the Southern States, will oppose the surrender of their quarantine rights to the general government. It is a sensitive point in this State, particularly, where we had one lesson of Government interference, which is quite enough to keep us all in fresh remembrance of its dangers. In 1868 the quarantine of the Cape Fear River was under State control, as now, and was conducted to the satisfaction of the public. General Sickles, the military governor of the State under the laws of reconstruction, made a visit to this conquered province, coming in by steamer up the Cape Fear River to Wilmington. His vessel was from an interdicted port, and he was warned by the pilot of the rule of stopping at the quarantine station. In violation of all good manners and morals, this protector and executor of the law, by a stroke of the pen abolished the law of quarantine. When remonstrated with in a dignified and polite manner, by the Chairman of the Board of Navigation, his responses were those of a tyrant who had no regard for existing law. This outrage it is right to remember, and we do well to use it as a warning to over-zealous sanitarians when they see only the fair side of national quarantine. Let the general government be prepared to aid quarantine in time of need, and they will be accepted as allies, but not as the principal in our quarantine plans. The generation of military tyrants has not died out, and not the least one or the most moderate one should be tempted with such power as national control might permit.

The second part of this pamphlet, containing the report of a critical inspection of the New York quarantine, has done good, and a strong movement is being made towards an improvement in this matter. Just criticism, when couched in temperate language, will most always arouse the public to take a proper attitude in such questions, but defend us from the short-sighted philosophers who

cannot see any other remedy for such great evils than surrendering ancient rights to the general government, to be finally used as a political foot-ball between two contending parties.

"Treatment of Chronic Suppurative Otitis Media," "Operations for Mastoid Disease," and "Statistical Report of 5,700 Cases of Ear Diseases," by S. S. Bishop, M.D., of Chicago,

Are the titles of small pamphlets on important subjects, but in the well-beaten paths of medical knowledge, serving to indicate how active otology is, and inculcating good lessons for the general practitioner.

Pathology, Diagnosis and Treatment of Perforation of the Appendix Vermiformis. By J. McF. Gaston, M.D., Atlanta, Ga.

The author disclaims setting forth observations of a practical nature to serve as a guide to the general practitioner. After discussing the general principles as set forth by standard writers, he deduces the following :

1. The primary disorder is dependent upon a local irritant, either mechanical, chemical or vital, inducing ulceration and disintegration at some point in its walls.

2. The modification in the tissues of adjacent parts depends upon the presence of a toxic exudation from its cavity, that ultimately leads to disorganization of structure.

3. Extension of the degenerating process depends upon the permeation of the structures with the fæcal matter, but may result from suppuration, or the automatic propagation of inflammation from one part to another.

4. Agglutination between the layers of peritoneum may shut in purulent accumulations, and thus limit the inflammatory action to a circumscribed area, so as to assume the nature of an abscess in that locality.

5. General peritonitis may be accompanied by extensive adhesions of the adjacent serous membranes, and followed by vital prostration and collapse, calling for the knife.

6. Septicæmia may occur from absorption of septic matter independent of suppuration, and associated with a low form of fever which ought to be treated by antiseptics and irrigation of the abdominal cavity by hot water.

7. When there are sufficient indications of perforation in the general symptoms, with pain and tenderness on pressure over the cæcal region, without signs of fluctuation, an exploratory puncture below the ileo-cæcal junction is warranted.

8. If there are any reasonable grounds to believe that pus is present, or that there is extravasation of fæcal matter, whether from the perforation of the cæcum or appendix, a free incision above Poupart's ligament should be carried down to those parts and drainage kept up afterwards.

9. In perforation of the appendix associated with general peritonitis an incision in the linea alba affords the best prospect of reaching all the parts involved, and should be accompanied by thorough cleansing of the abdominal cavity, and especially of the ileo-cæcal region.

10. The most efficient means of closing an opening in the cæcum is by Lembert's suture, while an opening in the appendix demands excision and ligation.

11. When perforation is suspected, washing out the abdomen by the use of a syringe and two tubes will assist in the diagnosis and treatment.

12. An early operation with a doubtful diagnosis of perforation of the appendix lessens the likelihood for a confirmation of it by a necropsy, and hence no time should be lost in awaiting developments.

“Hypertrophy of Tonsil of the Tongue,” and “Traumatic Hæmatoma of the Larynx.” By J. W. Gleitsmann, M.D.

The term “tonsil of the tongue” needs the author's description to make it plain :

“The tonsil of the tongue consists of a group of follicular glands similar to those of the faucial and pharyngeal tonsil, and forms the connecting link of the great lymphatic ring of the pharynx. Commencing at the pharyngeal tonsil, this ring extends to the orifice of the Eustachian tube, then, turning downward along the posterior surface of the soft palate to the faucial tonsil, it reaches the base of the tongue, and returns in the same order. The ring has an almost vertical position, and is characterized by an accumulation of follicular glands in several places. The glands are found in two different forms; in some localities they appear in aggregated, in others in

disseminated form. When they are aggregated they represent a circumscribed mass, which is commonly called a tonsil. Other attributes of a tonsil are a dense, diffuse infiltration of the connective tissue with lymph-cells, and the prevalence of follicular, or, as Cohen better calls them, saccular glands. While these three conditions exist in the faucial and pharyngeal tonsil, the tonsil of the Eustachian tube and of the tongue have not the circumscribed form, and contain the follicular glands in the disseminated state. But cases are not rare in which the accumulation of these glands assumes a formidable, well-defined shape, and the Eustachian tonsil has been known as such for some time. The name, tonsil of the tongue, has, as I think, been used with perfect propriety by some writers for a similar condition at the base of this organ. Without further entering into the histology of these formations, it is well to remember that they are not glands in the common sense. They have no excretory duct nor outlet, are closed bodies, and by their function belong to the lymphatic system. They are of the size of a lentil, are loosely embedded in the submucous tissue, and their hilus is covered by a thin mucous membrane. Their sac contains a varying number of follicles, closely resembling those of Peyer's glands of the intestines."

The following are the symptoms of this hypertrophy: 1, of the sensation of a foreign body or of pressure in their throat; 2, of interference with their speaking or singing; 3, of pain when there is subacute inflammation of the glands; 4, of radiating pain; 5, of cough; 6, of asthmatic attacks.

The author gives some illustrative cases, and prefers the use of the galvano-cautery to lunar caustic.

The second pamphlet is not of general interest.

A Study of the Causes and Treatment of Uterine Displacements.
By Thomas Addis Emmet, M.D.

Dr. Emmet's experience in the treatment of displacements as set forth in this pamphlet (Reprint from Vol. XII. Gynecological Transactions, 1887) is one of those reactionary papers which embody the result of the best thought. When the chapter on the theories of the pessary and the catalogue of the multitudinous devices are presented in a volume, that one may take in at glance all that has been said and done, it will be little credit to instrumental gynecology.

We can only give a part of Dr. Emmet's summary :

"We will now briefly consider what is to be accomplished by the successful use of a pessary.

"Many an operator has acquired the art of fitting a pessary which may do no harm, but which does no good. The whole skill in the successful application of a pessary is to so construct it in size and shape that, while it relieves the prolapse, it will just dispose of the overstretch. Thus the needed support to the connective tissue will be restored, and it is only when this has been accomplished that the pelvic circulation can be kept within its proper limits and the patient be relieved.

"A pessary, then, does not give relief by simply counteracting version. Its effect is an indirect one, because, when properly fitted, it diminishes congestion, by correcting the prolapse and giving tone to the connective tissue of the pelvis.

"If a uterus, free from peritoneal adhesion, be replaced and a sufficient support to the fascia be again brought into play, it will be then retained in position through aid of the natural elasticity of the surrounding tissues. This principle underlies all successful modes of treatment, where the ultimate result is gained by diminishing the size of the blood-vessels.

"The knee and chest position, through the aid of atmospheric pressure, accomplishes this for the time. The weight of the water in the vaginal injection, when it is properly given, with the patient lying upon her back and with the hips elevated, acts, by a uniform pressure, in the same manner. But the effect is only a temporary one.

"For years past I have employed, as my daily practice in treating some cases, a few pieces of cotton saturated with glycerine, placed as a crutch to lift the uterus, and thus relieve tension along some line shortened by inflammation. But I have never used more than was necessary to correct the degree of prolapse, and this was sufficient to take in the slack and obtain the necessary support to the vessels.

"This mode of treatment has been recently advocated, but without a full recognition of the principle upon which it acts. If the cotton pledgets be applied with the patient in the knee and chest position, while the vagina is consequently fully dilated, and if the

large quantity of cotton recommended be packed in, the practice is more likely to prove a source of irritation than of benefit.

"If I have correctly stated the common causes of uterine displacements, it must become apparent, upon a moment's reflection, that the profitable range for the use of pessaries is not an extensive one. Moreover, if not employed within this range and with great judgment, the bad effects from their use may become serious to the patient. The practitioner himself, unfortunately, is rarely conscious of his own instrumentality in the damage done, as it is but natural that the consequences, if recognized, should be attributed to almost any other cause.

"I realize fully that I may be misunderstood and my views hereafter misrepresented, in a statement that I do not approve of the use of pessaries. I therefore beg to state distinctly that I believe nothing can take the place of pessaries when properly fitted, and when used in the proper class of cases. My purpose has been to make the point that the field for the usefulness of the instrument is a much more limited one than is generally realized.

"But an attempt to teach something new on this subject seems almost a thankless task in this day and generation; for I have observed that, if there is one thing more than another which is now considered to be thoroughly understood in all its bearings by the general practitioner, and by those who have the least knowledge of the diseases of women, it is the fitting of a pessary. Therefore it is not to be expected that a man who prides himself upon his skill in this line will change his practice, yet he may mistake, as an evidence of his dexterity, the degree of tolerance with which the Almighty, in his infinite wisdom, has endowed the female pelvis.

"In fact, we must regard a displacement of the uterus as a symptom merely, and, as soon as this becomes generally accepted, the cause will be sought for intelligently. We will then see less damage done through the ignorant use of pessaries, and those who now denounce them will become convinced of their great efficacy.

"We have all been taught in early life that a displacement is a condition which should be corrected for the same reason that a luxation of a bone should be reduced. If the displacement be a recent accident, the practice is correct in both instances, but no one will gainsay the fact that it would be a criminal procedure to attempt the reduction of a long-standing luxation, without a full appreciation of the respon-

sibility assumed, and of the danger to the patient. How many of us have, time and again, in ignorance of all previous history of the local condition, thoughtlessly lifted a retro-flexed or a retroverted uterus, and have justified the consequences with the statement that the patient did not bear well the use of pessaries? I do not think that I exaggerate when I claim that the evil consequences to the patient would be less from the skillful reduction of a long-standing luxation.

“My statement of the case will be met with the plea that something must be done to enable these women to get about, and many experiences will be cited to give varied instances where they were sufficiently relieved, after the introduction of a pessary, to be fairly well. I acknowledge that the remembrance of such cases has great weight in reconciling one to the temptation of doing for an individual what we are all willing to confess would be, as a rule, a disastrous course of practice. I have traced the history of a large number of women who have been thus treated for displacements of the uterus. Year after year they have passed from one medical man to another, and each in turn has lost sight of the case with the impression that his individual dexterity in fitting the pessary had been successful. As a result of this investigation, I am free to state, in all truth, that not a single instance has come under observation which was permanently cured by the use of a pessary, where there had been reason to believe that any previous pelvic inflammation had complicated the case. With a number there was a remarkable degree of tolerance, and for a time they did fairly well, but the end was the same in all, and there was no restoration to health until nature repaired the damage, so far as she was able, after the menopause.

“On the other hand, under favorable circumstances, and with proper treatment, a woman can be restored to health in a comparatively short time. As the inflammation subsides, the displaced uterus will gradually return to its natural position unaided, as I have observed it frequently to do. If eventually the necessity exists to replace it, this can be then done without the slightest pain, and a pessary may be used to great advantage until the neighboring tissues have recovered their tone.”

NOTES.

THE MEDICAL SOCIETY OF NORTH CAROLINA.—This Society will hold its Annual Meeting in Fayetteville on the 8th day of May, 1888. At the same time and place the NORTH CAROLINA BOARD OF HEALTH and the NORTH CAROLINA BOARD OF EXAMINERS will assemble. The latter body will meet a day in advance of the general meeting, notice to be given hereafter.

APPLETON'S PRIZE FOR THE APPLICANT WHO STANDS THE BEST EXAMINATION BEFORE THE BOARD OF MEDICAL EXAMINERS.—Messrs. D. Appleton & Co., the well-known publishers, generously offer a prize of books to the value of \$25, from their lists of medical works to the licentiate who passes the best examination at the Fayetteville meeting of the Medical Society.

WILLIAM F. JENKS' MEMORIAL PRIZE.—Two hundred and fifty dollars will be awarded to the successful competitor for an essay on "*Diagnosis and Treatment of Extra-Uterine Pregnancy.*" The competition is open to the world, but all the essays must be in English and under cover, as usually prescribed. Essays should be sent before January, 1889, to Ellwood Wilson, M.D., College of Physicians of Philadelphia.

THE METROPOLITAN CLINIC, established at 445 West 48th St., New York, for Surgery and Diseases of Women and Children, is opened Tuesday, Thursday and Saturday, under the management of Dr. A. H. Goelet and Dr. W. B. Pritchard, both North Carolinians. Dr. Pritchard is also a member of the staff of the Manhattan Dispensary 350 West 53d St. We wish them abundant success, and we are sure will obtain it if attention to duties and skill go for anything.

DEATH OF PROFESSOR ASA GRAY.—The whole botanical world is in mourning for Professor Gray! He was blessed with that remarkable longevity accorded to so many botanists, and his life was crowned with well-earned honors. Few men live to see their works go through so many editions. We believe he edited, just before he died, a little work given to the world fifty years ago. He has also left a well ordered succession in his botanical family, so that the *North American Flora* will be completed by hands and heads skilled like his own. All honor to such a successful life!

DR. ACHILLE FOVILLE, of Cherenton, France, author of *La Folie de Grandeur* and other treatises on neurology and psychiatry, died recently, we learn from the *Medical Record*.

AN effort is being made to establish a charity hospital at Greensborough, and we have no doubt it will succeed. We are pleased to learn that efforts in other towns are so successful.

DR. JAMES R. NICHOLS, the well known editor of the *Journal of Chemistry*, now the *Popular Science News*, is dead. He was 69 years of age. His visit to Wilmington some years ago is remembered with pleasure by the physicians who formed his acquaintance.

DR. KINLOCH'S PAPER IN THE JANUARY JOURNAL.—We regret that we should have so marred Dr. Kinloch's excellent paper in the last JOURNAL by bad proof-reading. The proof, which should have been sent to him, was read in our office, and worked off before we could send a "revise" to him. The following corrections should be made: In title, fistula for fistulæ; 7th line from bottom of 10th page, hysterectomy for hysteroctomy; sinus for serious on page 13, and verified for verified 10th line from end of article. There is not one of our readers who knows Dr. Kinloch—and who does not?—that would not know that the errors in his paper were not his, but those of the proof-reader.

IN the article "*On Guanin Gout in the Hog, and Its Relation to the Sodium Urate Gout of Man*," by Dr. Mendelson (*American Journal of the Medical Sciences*), besides the lesson in comparative pathology, we have some useful hints as to what the little chalky grains are which we meet in some specimens of bacon. He says they are *guanin*, a nitrogenous crystalline substance resulting from tissue metamorphosis. It was discovered in 1844 by Unger in Peruvian guano, and is accounted for there by the food on which birds feed whose droppings form guano, viz: that the fish on which they feed have an iridescent silvery material beneath their scales which is composed, probably, wholly of guano-lime. It may be identified as follows: Evaporated on platinum foil with a drop or two of strong nitric acid, a shiny, yellowish-red residue remains, which, if touched when cold with a drop of sodium hydroxide solution, becomes a deep reddish-brown color, changing to dark purple

on heating. These bodies are found on certain points of the bone (in ham his specimens were found), between the epiphyses and shafts; in the ligaments and periarticular tissues generally; in the muscles at the inter-muscular septa. The above abstracts from this useful paper will answer some questions put to us by a correspondent who sent us a specimen of bacon with these bodies, suspecting trichinia.

COCAINE combines with saccharine in the proportion of 183 of the latter to 303 of the former, yielding a freely soluble salt of sweet fruity taste, containing about 80 per cent. of the alkaloidal strength of the muriate of cocaine. This discovery was made by Dr. Andrew H. Smith in New York *Medical Record*.

COLCHICUM FOR GOUT.—Dr. J. Burney Yeo calls attention to the use of colchicum in an address on the "*Therapeutics of the Uric Acid Diathesis*" (*British Medical Journal*), and says that Prof. Bartholow gives one of the best practical accounts of the uses of colchicum. Dr. Yeo in this connection points out why colchicum is under-valued these days: "In small doses it increases the mucous and glandular secretion of the stomach and intestines, and probably, also, of the liver, kidneys and skin. . . . It increases the flow of urine, of the solid constituents, as well as of the water, and promotes the cutaneous transpiration. . . . It is indicated when a prompt elimination of waste is required. . . . It relieves the pain, diminishes the swelling and shortens the duration of acute gout. In order to accomplish these results it is necessary that the more harsh and violent physiological effects of the drug be produced. Sufficient should be given to increase the secretion from the skin, the intestinal mucous membrane and the kidneys, but nausea and vomiting should be avoided. 'Combination with an alkali increases the therapeutic effect. He gives the very moderate dose of 12 minims of the wine of the seed, with 40 minims of aromatic spirits of ammonia, every three hours, until some physiological effect is produced. He adds: "Combined with saline purgatives, it quickly relieves the constipation, hepatic congestion, and headache of gouty subjects. It is useful in gouty bronchitis; it often relieves neuralgia occurring in gouty constitutions; it relieves by setting up an eliminative process."

S. E. McCALLUM, M.D., Mt. Vernon, Tenn., writes: ' I have tried Lactated Food in cases of cholera-infantum. Am well pleased with it. It agrees with the stomach of infants better than any other food I have used.'

IMPORT DUTY ON SURGICAL INSTRUMENTS.—The Georgia Medical Society has set on foot a memorial to Congress to abolish the duty on surgical instruments. We do not know the merits of the case, but if we will get *better and cheaper* instruments by abolishing the duty, the effort is worth making. All interested will please address Dr. J. C. Le Hardy, Corresponding Secretary, Savannah, Ga.

ANALYSIS of fifty cases of Intubation of the Larynx for croup, by Dr. O'Dwyer, the originator of the procedure, is given in the New York *Medical Journal* of January 14. Thirty-four of the cases died, sixteen recovered. It is to be hoped that this operation may be so simplified as to be in the reach of all. The experimental stage of its progress seems to be unusually protracted, but its author lacks none of the sort of courage to bring a final success.

SUCCUS ALTERANS (McDADE).—Owing to the claims made by some parties that they obtain this well known preparation in bulk, it is important that physicians should know such are false, as we are informed by the manufacturers that Succus Alterans is only put in pint, round amber bottles. This remedy has come into such general use by the profession, that care should be taken to secure the genuine, prepared by Eli Lilly & Company, which has given such good results and established the reputation it now enjoys.—*Indiana Eclectic Medical Journal*.

SURGERY.—The "*Annals of Surgery*," the only English journal published devoted exclusively to Surgery, enters now upon its fourth year. Drs. L. S. Pilcher, of Brooklyn, N. Y., and C. B. Keetley, of London, England, are the chief editors, assisted by most all the able surgeons of this country as well as Europe, which is sufficient guarantee of the literary merits. We bespeak for it the coöperation of the members of the Profession who are interested in progressive Surgery. J. H. Chambers & Co., St. Louis, Mo., are the publishers, and deserve great credit for undertaking to produce such an important journal as "*Annals*," and for its artistic execution.

OBITUARY.

PROFESSOR OTIS FREDERICK MANSON, M.D.

"The prime qualities of a physician may be summed up in the words: *Cassax, perspicax, sagax, efficax*. *Cassax*—there must be room to receive, and arrange, and keep knowledge; *perspicax*—senses and perceptions, keen, accurate, immediate, to bring in materials from suitable things; *sagax*—a central power of knowing what is what, and what it is worth, of choosing and rejecting, of judging, and, finally, *efficax*—the will and the way—the power to turn the other three—capacity, perspicacity, sagacity, to account, in the performance of the thing in hand, and thus rendering back to the outer world, in a new and useful form, what you have received from it.—JOHN BROWN, M.D.—*Horæ Subsivivæ*.

No calling in life involves more nobly the best attributes of man than that of Medicine; its just offices exacting, at once, and continuously, engrossing solicitude, unremitting study, sacrifice of personal comfort, and absolute disregard of peril.

It may be confidently assumed that, in the luminous roll in the world's history of devotees of the healing art, not one has been more sublimely possessed than was the subject of this notice.

The life-springs of Otis Frederick Manson were inspiring. His original extraction was Scotch—a race distinctively fervent, leal and indomitable. He was the great-grandson of Dr. Nathan Hemingway and of Frederick Manson, both of whom emigrated from Glamis, Scotland, in the earlier decades of the last century, and settled in Roxborough, Massachusetts. An early and time-worn emblazoning preserved by a descendant of Frederick Manson, indicates his origin. The arms displayed are those given by Burke as of Innerthie, as follows: *Argent, a long cross gules, between two mullets in chief, and a crescent in base azure*. Frederick Manson, Jr., of Farmington, Massachusetts, son of the emigrant, attested his lineage and patriotism at Concord, Lexington and Monmouth in the American struggle, the result of which was a beacon to freedom throughout the world.

The son of the last named, Otis Manson, served in the second war with Great Britain, in 1812, and settled at Richmond, Virginia, as an architect and builder. He was a prominent, useful and valued citizen, serving for many years as a member of the City Council and of several charitable and educational boards. His son, Otis Frederick Manson, was born in Richmond, October 10, 1822, and had such educational advantages as the city afforded, his final course being at the Richmond Academy, under one John Burke, a classical scholar, and his school-mates included many who afterwards became prominent. As a lad, he was, too, a member for years of the Patrick Henry Literary and Debating Society, among whose members may be recalled the late Colonel Thomas P. August, of soulful wit, and the earnest bibliomaniac and useful citizen, Thomas H. Wynne. Otis Frederick Manson was graduated from the Medical Department of Hampden-Sydney

College (now the Medical College of Virginia) at the age of eighteen years, and settled soon after, in 1841, in Granville county, North Carolina. On the breaking out of the small-pox epidemic in the border county of Mecklenburg, Virginia, a year later, Dr. Manson was appointed physician to the infected district, and by his zeal and ability laid the basis of the affectionate regard in which he was soon after held by the people of North Carolina. There being no vaccine virus obtainable, he treated his patients by inoculation with marked success.

In 1862 he was commissioned a surgeon in the Confederate States Army, and placed in charge of a hospital in Richmond. He was subsequently appointed Medical Agent, with the rank of Major, by the State of North Carolina, to afford relief to its troops in Virginia, which he did in an admirably supplied and conducted hospital for the sick and wounded, and a refreshment house for the soldiers *en route* to and from the army. These positions he continued to hold until the surrender of General Lee, and with such signal satisfaction to all interested, that Governor Vance testified gratefully that "he endeared himself not only to me, but every man, woman and child in North Carolina loves him." After the war Dr. Manson settled in Richmond in the practice of his profession, and January 23, 1869, was appointed Professor of Pathology and Physiology in the Medical College of Virginia, which position he continued to hold until November 1, 1882, when he resigned to devote himself to his practice. At the next subsequent meeting of the Board of the College he was elected Emeritus Professor of the chairs he had so long and ably filled.

He was also for some time a member of the Board of Medical Examiners of the State of Virginia, as he had been of that of North Carolina. He also served as a member of the Council of the city of Richmond from July 1, 1874, to July 1, 1882, for the last two years as its President. He subsequently devoted himself exclusively to his profession, declining further official trust. He was latterly physician to the numerous employes of the extensive tobacco manufacturing establishment of Allen & Ginter, a trust which so severely taxed his waning physical capacity, in his devoted and self-sacrificing ministrations, as to occasion a collapse of his system and his death from apoplexy January 25, 1888. In grateful tribute to his exalted zeal, these beneficiaries gave touching expression at the obsequies in numerous beautiful floral designs. After a most impressive service, a benefactor of his kind was laid at rest in the lately laid off addition to Richmond's picturesque "City of the Dead"—Hollywood—near the banks of the historic James, and within sound of its murmuring waters.

Dr. Manson, in the science of his profession, was not only singularly profound, but he possessed the intuition of inborn destiny and the inspiring realization of the discoverer. An unremitting student, an acute observer, thorough investigator, and (once convinced) a confident essayer, he boldly put in practice, indifferent to the criticism of his conventional associates, the results of his genius.

His contributions to medical science since 1846 have been numer-

ous in papers on "Malarial Fever," "Pneumonia," "Cholera Infantum," "Puerperal Fever," etc., advocating their miasmatic origin and the free employment of quinine as a sedative, anti-phlogistic and anti-pyretic in their treatment, and also extending its use in erysipelas, scarlatina, croup, rheumatism, etc.

As early as January, 1855, Dr. Manson published a most important original discovery of his in his observation of the phenomena of Remittent Fever in puerperal cases; its pathology and treatment. His claim as discoverer has been unqualifiedly admitted by Dr. Fordyce Barker, the eminent author of the best work on "Puerperal Diseases," and by all authorities now, English and American. Dr. Barker, in a letter to Dr. Manson, magnanimously testified: "I cordially congratulate you on the fact that, so far as my acquaintance with medical literature permits me to judge, you are the first medical writer who has described this [the presence of malarial fever] as a distinctive feature."

Not only in his profession was Dr. Manson learned, but his accomplishments in other fields of investigation and branches of learning were varied and extensive. Pure and refined in his tastes, gentle, courteous and winning in his manners, tasteful in his attire, and dignified in bearing, with a responsive nature, abounding in sympathy and charity, his merits and virtues assured him affectionate regard.

He possessed a singularly choice and valuable library, in medical and general literature, numbering more than two thousand volumes, the medical portion of which included the earliest printed theses and works in several languages. The more important of his recently published contributions to medicine are: "A Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine," 12mo., Philadelphia, 1882, and "A Treatise on Malarial Hæmorrhage, embracing Epistaxis, Odontorrhagia, Stomatorrhagia, Hæmoptysis, Hæmatemesis, Enterorrhagia, Metrorrhagia and Hæmaturia," 8vo., Richmond, 1886. The last was a chapter towards, and to be included in, a life-cherished work of the lamented and learned author—"A History of Fevers from the Earliest Times"—for consultation in the preparation of which he had spared no expense in providing himself with all obtainable authorities.

Dr. Manson was twice married—first, in 1843, to Mary Anne Spotswood, daughter of Spotswood Burwell, Esq., of Granville county, North Carolina, and a great-grand-daughter of Colonel Alexander Spotswood, one of the ablest Governors of Colonial Virginia. He had issue by this marriage: 1. Sallie Spotswood—married A. L. Hunt, Esq. (and had issue: Albert Frederick, Mary Eliza, Sanger Manson and William Manson). 2. Otis, now residing in Texas. 3. Eliza Sanger—married Thomas Lee Alfriend, Esq., Richmond, Va. (who has issue: Mary Burwell, Otis Manson, Sallie Spotswood and Anna Lee). 4. William Frederick—married Mary, daughter of Dr. E. H. Randall, of Calvert, Texas, and now resides in New York City. 5. Mary Anna—is the second wife of A. L.

Huntt, Esq., as above. 6. Lewis Burwell—married Ella Trueman, of Kentucky, and now resides in Texas.

Dr. Manson married, secondly, October 25, 1881, Mrs. Helen (Gray) Wattson, daughter of the late William Gray, Esq., a wealthy and influential tobacco manufacturer and exporter of Richmond, and by whom there is no surviving issue.

A brother and two sisters of Dr. Manson survive: Colonel Charles H. Manson, Columbia, South Carolina, who has been most prominently connected with the railroad interests of the South for many years, and whose friends count legions; Mrs. Eliza Sanger Eaton, residing in San Francisco, California, and Mrs. Mary Littlejohn, in New Orleans, Louisiana.

Science has sustained a loss and the Medical Profession mourns in the extinguishment of a light and the translation of an exponent and an apostle.

Requiescat in pace!

R. A. BROCK.

FREDERICK THOMPSON, M.D.

We regret very much to learn of the death of Dr. Frederick Thompson, a highly esteemed resident of the Point Caswell section, which occurred yesterday morning at his residence, about four miles from the village. He was a native of this city, but when a mere lad he removed to Point Caswell and has ever since resided there, engaged in the practice of his profession. He early volunteered his services during the war, and joined the company raised in the Black River section, of which Dr. John R. Hawes was made captain. Dr. Thompson was elected a lieutenant and served in this capacity during the first year of the war, the company having been attached to the 18th N. C. Regiment. On the reorganization of the regiment, in 1862, Dr. Thompson was elected captain, but this position he afterwards resigned and enlisted in the Third N. C. Cavalry, where he remained until the close of the war. Just previous to the outbreak of hostilities he was at the University of New York, attending medical lectures, but he, in common with other students from the South, withdrew and went to the Medical College at Nashville, where he graduated.

A year or two after the war Dr. Thompson married Miss Carrie, daughter of Mr. Randolph Corbett, who, with three children, two sons and one daughter, survives him.

He was a gentleman of high, honorable, noble impulses, and his death is a serious loss, not only to those near and dear to him, but to the people of his entire section.—*Daily Review*.

SUBJECT for general discussion before the Medical Society of North Carolina, at the approaching meeting in Fayetteville, Tuesday, May 8th, will be, "*How far the New Antipyretics Substitute Quinine.*" Dr. R. F. Lewis, of Lumberton, will lead the discussion.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLETTS THOMAS, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

SPINAL IRRITATION AS A COMPLICATION OF PREGNANCY AND LABOR.

By J. L. NAPIER, M.D., Blenheim, S. C.

Having very recently attended two cases of obstetrics, the complications of which were unusual and different from anything laid down in the medical books, I deem it my duty to publish the same, hoping some of the many readers of your JOURNAL, who have had similar cases, will report them with their treatment.

I propose to go back as far as the year 1883, and detail a case I then had troubled with the complication, which became so very prominent in the last two cases, one of which proved fatal.

I will call the complication, for want of a better name, "Spinal Irritation." On March 6, 1883, I was called to see Mrs. A. W., mother of six children and pregnant with the seventh. I found her somewhat œdematous, with a bad dry cough and troubled with dyspnoea; the heart's action somewhat fast and weak, though irregular. On exami-

nation I found a tender vertebra in the dorsal region, pressure on which aggravated the symptoms. I used counter-irritation, bromide potash and tincture digitalis.

On the 7th I visited her again and found her better; said she felt better as soon as the blister drew. She went on fairly well until the 14th, when she was taken in labor. The labor was a normal one, so far as the birth of the child was concerned, but as labor progressed dyspnœa became bad, and when the second stage was reached, very alarmingly. When the head began to distend the perinæum her face became ashy blue, and she began to gasp for breath, with an almost imperceptible pulse at the wrist. I had been giving digitalis, belladonna, morphine and carb. ammonia to sustain the heart's action. At this time she sat up in bed, and her husband placed his hand over the point she had been blistered, to support her. When he did so she said: "Press harder, I can get my breath better when you press there." I immediately placed a sinapism I had been using over the heart on her back, and told him to press on it. This seemed to benefit her more than anything I had done. Soon after this the child was born, and the dyspnœa gradually passed off and the heart's action became stronger and slower. I neglected to say that she suffered intense pains of a neuralgic nature in the region of the heart. I saw no more of the complication after this until the 15th of December, 1886, when I was called to see a negro woman, mother of eleven children, pregnant with the twelfth and near her confinement. I found her complaining of severe headache, pain in the chest and abdomen, with some fever. On examination I found tender spots in the cervical, dorsal and lumbar vertebræ, pressure on which would aggravate the pains. I blistered the tender joints and gave 20 grs. salicin every two hours. On visiting her the following day found her much better, continued treatment for twenty-four hours longer, when she was apparently relieved.

On December 24 was called to see her again and found her sick as before; repeated treatment with apparent relief. On January 10th, 1887, she was taken ill with all the symptoms in an aggravated form, and twelve hours after the return of them labor began, when she gave birth to a healthy child, and soon *after died*. I was absent during her last illness and labor, and so did not see her, but the midwife said she could not get her breath. There was no flowing or convulsions.

On the night of the 22d of March, 1887, was called to see Mrs. W. C., mother of one child and pregnant with the second, expecting

to be confined in May. On examination I found she was having what she thought was labor pains, and complaining very much with every pain. I made a vaginal examination and found labor had not set in, and the uterus did not contract when the pains were on. I examined the spine and found a tender joint in the lumbar region, pressure on which would bring on the pains. I used a sinapism and gave 20 grs. salicin every two hours and the pains subsided.

On May 9th was called to see her again, and found a similar state of things. Treated as before with relief. On 26th was called and found her suffering as at first; blistered irritable joint and kept up salicin for several days. June 18th was called, found her in labor and delivered her of a healthy child; was not troubled with complication. This patient was œdematous; gave cream tartar as a laxative and diuretic.

On May 6th, 1887, was called to see a negro woman, mother of several children, pregnant and very near her confinement. Found her complaining of severe headache, pain in thorax, and, as she thought, labor pains. On examination I found spinal irritation. Pressure on the cervical vertebræ would increase pain in head, on dorsal the pain in the chest, and on lumbar vertebræ the pains would simulate labor pains. I blistered the irritable vertebræ, gave 20 grs. salicin every two hours. After the blister drew and she became under the influence of salicin all the symptoms subsided. On the 10th I attended her in labor. All the previous symptoms returned, but did not seriously interfere with labor. She gave birth to a healthy child and made a good recovery.

About the last of July, 1887, Mrs. H., mother of six children and pregnant with the seventh, was taken ill, complained of headache, dimness of vision, difficult deglutition and colic-like pains. Found that all the pains were aggravated by pressure along the spine; gave 20 grs. salicin every two hours and used cups along the spine. (She had suffered from several attacks of spinal irritation, ranging over a period of four or five years.) After using the above treatment she was somewhat relieved, but did not remain so long. In a few days she became much worse, was very much swollen, kidneys acting badly and vomiting frequently. I continued counter-irritation to spine and gave cream tartar and digitalis. The kidneys responded to treatment and there was a very perceptible lessening of the œdema, but the vomiting and vision did not improve, and she had frequent attacks of dyspnoea. I called in Dr. J. H. Lane, who, upon examination, thought most of

the trouble came from the stomach, she having been troubled with vomiting, more or less, through the whole period of gestation, and advised an antacid and tonic and laxative for the bowels. She became rapidly worse—dyspnœa, colic-like pains, pains simulating labor pains, nausea, with frequent vomiting and steadily increasing blindness were all intensified. After an attack of vomiting she lost consciousness for half a minute, and was paralyzed for a short time on one side. After this attack she lost sight in right eye and vision very slight in the left. I cupped her on the back of neck and gave an active cathartic. Her mind at this time began to wander, and she had been troubled for several days with an intolerance of light, and pressure at any time along the spine would give intense pain. At this stage we called in Dr. J. T. Jennings and Dr. J. L. Jordan in consultation on the morning of the 19th August. They advised digitalis, keep the bowels open, and morphine to keep her quiet. On the morning of the 20th Drs. Lane and Jordan returned; at that time she was totally blind, tongue so much paralyzed that she could not be understood; she was delirious and *very restless*, the kidneys, though, were acting very freely. We gave 15 grs. calomel, which acted very freely on bowels, and other treatment continued. At 9 A. M. Dr. Jordan returned and remained with me during the night. About 3 o'clock A. M. on the 21st labor pains came on, and at this time the case seemed hopeless, the heart acting very fast and weak, and as labor progressed rapidly weakened. At 6 A. M. Dr. Lane returned; at this time the pulse was scarcely perceptible at wrist, the surface of the body of a blueish-gray color from capillary stagnation and the extremities cold, the finger drawn along the surface of the body would leave a white mark that would slowly disappear, and she was exceedingly restless. Ten grains carb. ammonia and 6 gtt. fld. ext. belladonna were now given. In half hour the pulse began to grow stronger and the surface of the body to assume a natural hue. About this time the os had dilated enough to admit the finger, and we ruptured the membranes. In a few hours the child was born, a dose of morphine administered and blister put on back of her head and neck, the morphine repeated once and she dozed off to sleep, which lasted pretty well all night. Next morning consciousness had partly returned and vision slight in both eyes. Her recovery was slow but steady for ten days, when she had a return of spinal irritation, which yielded to counter-irritation and salicin. The child is now five months old, her vision has slowly improved, she is

myopic and cannot see to read the largest print. The first cervical vertebræ is still tender, pressure on which darkens vision and causes pain in head, pressure over the dorsal region tightens breathing.

Now comes the last and fatal case. On December 27th I was consulted by Col. R. in reference to an attack his wife had had the night previous. I had been spoken to to attend her during her confinement, which was expected to take place about the first of January, 1888. The attack mentioned above was one of dyspnœa. Dr. J. L. Jordan living near, and it being several miles to my house, he was called in. When spoken to about the attack I at once consulted Dr. Jordan as to the nature of the trouble. He said it was an attack of dyspnœa, and that she (Mrs. R.) was somewhat œdematous and nervous. We decided to give digitalis, keep the bowels open and give anodynes to control the nervousness. Dr. Jordan kindly promised to keep her under observation and relieve any unpleasant symptoms that might arise. On December 31st I was hurriedly summoned by Dr. Jordan to visit Mrs. R.; he said in his note that she was almost totally blind, very nervous, and he thought threatened with convulsions, and would, in his opinion, be soon in labor. On visiting her I found her almost blind, but comparatively quiet. I remained that night and learned from Dr. Jordan the following history of the case: He had been called repeatedly to visit Mrs. R. At times the trouble was urgent, dyspnœa, then want of coördination of the muscles of deglutition, at others intense colic-like pains, and she was now having pains at irregular intervals in the lower abdomen. He had purged her, kept up the digitalis, and was using bromide and morphine to keep her quiet. Before going on with the history of this case I will give her history anterior to this pregnancy. She had convulsions with her first child from uremic poisoning, and was attended by Dr. J. H. Lane, who also attended her in her second confinement, in which she had no unusual trouble. In her next five confinements I attended her. In one of these she was threatened with convulsions, but was controlled by chloral hydrate.

To resume the case above mentioned, I remained with Mrs. R. during the night of December 31st. About 10 P. M. she began to have an attack of dyspnœa. I found upon pressure of the fifth cervical vertebræ the trouble was very much intensified. I scarified and cupped her, with instant relief. A short time before dawn there

was a threatened return of the trouble. I cupped her, using dry cup, and blistered her slightly in doing so. She had no return of that symptom, though pressure on that point would tighten her breathing. During one of my visits she had an attack of colic pain. I applied a wet cup over the dorsal spine with instant relief, and by repeating it that symptom subsided also. I found upon pressure over the lumbar vertebra pains simulating labor pains would be brought on; over the cervical spine difficult deglutition, and over the first cervical vertebra all the symptoms about the head, including the blindness, would be aggravated. I used cups and tartar emetic ointment as counter-irritants, gave salicin, and while she was under the influence of it she was always more quiet and free from pain, so much so that her sister, a very observant and intelligent lady, noticed it, and remarked the same to me. Digitalis was continued all the time, and the kidneys kept active, so much so that all the swelling subsided. The last two days before labor set in were spent in comparative quiet and ease, though the blindness continued the same, with an uneasy feeling about the head, with numbness of hands. On the night of January 7th, 1888, labor came on at 9 o'clock. There was nothing unusual about the mechanism of it except the pains of the first stage were unusually severe. She bore down as much with them as she did with those of the second stage. When she became very restless or nervous, I used chloroform to quiet her, but not enough to produce insensibility. About one hour before the child was born I noticed the heart's action was very fast and weak. She began to have dyspnœa, and was not in her right mind all the time. I gave morphine and digitalis and no more chloroform. Just before the birth of the child the heart was acting so badly I gave a dose of belladonna. After the birth of the child it was not more than five minutes before the placenta came away. I kept my hand on the uterus for twenty or thirty minutes, after which, the contraction being firm, I applied a binder, and told her to try and go to sleep. She dozed some fifteen or twenty minutes, when she was awakened by an after pain. I noticed that the heart was still acting badly, and repeated digitalis. I examined and found uterus firmly contracted. She now dozed off to sleep again, and in just one hour and twenty minutes after the birth of the child she awoke very nervous, and from the twitching and jerking of the muscles I thought she was going into convul-

sions, but before I could prepare anything for her it all passed off, when she said, "I think I must be flowing;" which, upon examination, I found to be the case. I immediately began pumping hot water into the uterus, and gave a teaspoonful of fld. ext. ergot, when the flowing was promptly arrested, although the uterus still kept trying to relax. I sent for Dr. Jordan as soon as flow began, and he came in a few minutes. It was fully one hour before we succeeded in getting a good contraction of uterus, though there was no loss of blood. The heart's action began to fail and coma set in. We sent for, and about 4 A. M. the Drs. Jennings arrived, when we used whiskey, digitalis, belladonna, morphine, carb. ammonia, ether, nitrite amyl, sinapisms and hot applications over the heart. The heart's action steadily weakened, the coma became more profound, and death closed the scene at 9:15 A. M.

I have detailed the cases above mentioned in the order they came under observation, not in the order of their gravity. I have had more cases of minor import, like two of those already noticed, but think these are enough to show the different degrees of the complication. In the first case the faulty action of the heart was evidently dependent upon the trouble with the spinal cord. I had that case under observation for three or four weeks, and pressure on the irritable vertebra would bring on dyspnœa, which became less and less until it all passed away. She is now living and free from any heart or lung trouble. In the other grave cases pressure along the spine would aggravate all the symptoms complained of. I do not think there can be any doubt but that the spinal cord was affected. In this day of professional skepticism if you fail to show a pathological cause for every ill flesh is heir to, the writers of our medical literature are apt to ignore a mere group of symptoms and pass them over without notice.

Wood, in his "Practice of Medicine," published in 1858, under the head of "Functional Derangement of the Spinal Cord" gives a full description of all the symptoms complained of in my cases, and says: "It may be a complication in other diseases." In the "Cyclopædia of Practieal Medicine," by Forbes, Tweedie and Conolly, revised by Dunglison, published in 1848, under the head of "New Formations in the Spinal Marrow," by R. W. Todd, there will be found a full description of the trouble. He says: "It is not fair to deny the previous existence of a morbid compression or irritation

of the spinal cord or of the spinal nerves at their origin because the anatomists can detect no vestige of disease after death." It must be remembered that the spinal cord and the nerves which emerge from it are surrounded by a venous anastomosis of remarkable complexity; that their veins do not possess valves, that they communicate freely with the superficial veins and with numerous muscular veins in region of the back. That respiration exerts a considerable influence on the venous circulation has long since been fully proved. Nowhere can we expect this effect to be more marked than in the venous plexus of the spine, when the respiratory movements are so constantly felt, and when muscular action is so prominent in all the action of the trunk. From these anatomical and physiological considerations we may with justice infer that such a degree of congestive or turgescence of the spinal venous plexus as will excite irritation at the origin of the spinal nerves may easily occur, and it appears to us that it is equally fair to conclude that such a congestion may exist ante-mortem, and no trace of it appear post-mortem; for, to set aside all other means of accounting for the absence of the appearances, the very sections which are made to get at the supposed seat of the disease are sufficient to dissipate the venous congestion. We have stated this much to show that anatomy affords some support to the doctrine of "Spinal Irritation" as a source of many obscure morbid phenomenon." He then goes on to quote from a work by the Messrs. Griffin and Limerick on functional affections of spinal cord and ganglionic system of nerves, in which they say: "The symptoms are in general localized to those regions of the body which receive their venous supply from that segment of the cord that occupies the irritable portion of the spine." They go on to say that "when the cervical portion is affected there will be fits of insensibility, paralysis, numbness of the cutaneous integuments, deafness, cough and oppression, amaurotic symptoms, hesitation and difficulty of speech, and when the dorsal portion is affected there will be pain, weight and constriction about the chest, cough and fits of syncope, sense of sinking, loss of appetite, vomiting, gastrodynia, etc.; when the lumbar portion is affected pains in abdomen, dysuria and ischuria, pains in the lower extremities, with disposition to paralysis."

I have quoted rather extensively from the last work to show that the symptoms in the cases I have given the history of are just the

same as he describes, and because I can find nothing in any of the late works bearing on it. Watson, Flint and Pepper, in their system of "Practical Medicine," have nothing to say on the subject. That the complication is not an uncommon one, and that it may prove a very serious one, the cases detailed above will fully show. Epilepsy proves fatal—can you find anything wrong with the brain-matter except in traumatic cases? A great many of the most deadly poisons kill and leave no trace by which they perform their work. Why may we not have a *materies morbi* here that may do its deadly work and leave no trace behind? That there was uremic poison in these cases there can be no doubt, for there was albumen in the urine. But why did the symptoms not improve when the kidneys were kept acting for days, and why was there an absence of convulsions and instead paralysis. In the last case the kidneys were kept very active all the time. I have had cases of total suppression of urine with coma and convulsions that made good recoveries, but they did not have any of the symptoms of those detailed above. Not one of us had ever seen a case like Mrs. H. or Mrs. R., though the youngest of us had been in active practice for twenty years, and the oldest for forty-five years, and we have all had a very large obstetrical practice.

I have a *theory*, if I may be allowed to so term it, to account for the trouble. Watson, in his "Practice," says: "Extensive epidemics leave their impress on humanity and change the type of diseases. He attributes the change from sthenic to asthenic to the epidemic of cholera that prevailed over the world in 1845." Now for several years our whole country was scourged by an epidemic of diphtheria, and numbers of tombs now mark the graves of its victims in every grave-yard in this broad land or ours. In my section of country in the summer and fall of 1880 the epidemic of diphtheria culminated in an outbreak of terrible malignancy, many of its victims would die in a few hours after they were taken. Since that time it has disappeared from among us in its epidemic form. Now and then we have or hear of a sporadic case, which sometimes proves fatal. In the fall of 1881 I noticed for the first time "spinal irritation" in the form of an epidemic, with symptoms just as described by Wood in his "Practice." I then had fifteen or twenty cases in the same locality. After that time the number of cases rapidly increased, so much so that every change of the weather gave us a crop of them,

and we had them in summer as well as winter. The trouble is, and has been so common, that one of our "Local Boards of Health" wrote to the State Board about it, and called it "Rheumatic Influenza." In the winter of 1883-'84 the acme of the epidemic was reached. In my practice during that winter I had sixteen cases which came very near together, and I am not sure but they should be classed as cases of cerebro-spinal meningitis, for they all had retraction of head, and in some of them the muscles of the back were also affected with tenderness along the whole spinal column on pressure, intolerance of light, pain in head and thorax, pain in abdomen and darting, lancinating pains in the extremities, with elevated temperature. I have seen every shade of it, from those just mentioned to a single irritable vertebra, with its accompanying pain aggravated on pressure. I have had it complicating almost every kind of disease in men, women and children. Its coming so close on the heels of the epidemic of diphtheria, I am compelled to think it has some connection with it, for we all lived in and breathed an atmosphere charged with that poison long enough for it to make its impress on us if it were capable of doing so. But take the theory of compression that the author quoted from does, and let us see what the result of that will be. That there is a direct connection between the cerebro-spinal system and that perpetual motion of man, the ganglionic system of nerves, there can be no doubt. Get the cerebro-spinal system interfered with, as you would by hyperæmia or extravasation, and where would you find a more favorable state of things than in the last days of pregnancy? and where could you better reach the climax than during the second stage of labor? The nervous current would be interfered with and the vital organs would ill perform their functions. Only let the pressure be sufficient, and the nervous current would be broken, and paralysis and death would follow.

LARGE DOSES OF OLIVE OIL IN THE TREATMENT OF HEPATIC COLIC.—Dr. J. Touatre, of New Orleans (*N. Y. Medical Journal*), gives an interesting account of his own cure of biliary colic. He took a small blue pill, and twelve hours later he took twelve tablespoonfuls of olive oil; a quarter of an hour later twelve more. His first evacuations contained no gall-stones, subsequently he passed sixty gall-stones, six as large as an olive. An inexpressible relief was obtained from pains over the liver.

WILMINGTON CITY HOSPITAL NOTES.

By W. W. LANE, M.D.

CASE 1.—*Cystic degeneration of left kidney—explorative laparotomy—death*

N. G., a fine-looking mustee, about sixty years of age, presented himself at the Hospital last April with the following history: Has enjoyed excellent health through life, being a man of good habits, with the exception of a very large right scrotal hernia, which, however, gave him no trouble. About two years ago, while at work in the docks in this city, he received a severe blow from a stick of timber in the left side, which stunned and rendered him unconscious for a time. After recovery he felt more or less pain, but says he does not recollect passing any bloody matter; the tumor soon developed, and at the time he came for relief it was of enormous size, presenting more the appearance of a large ovarian dropsy in the female than anything else, interfering greatly with respiration and causing considerable pain and general discomfort.

The diagnosis made out in the examination was cyst of the left kidney; his urine was found entirely free from albumen, with specific gravity normal; the excretion being carried on evidently solely by the remaining healthy kidney, he suffered no trouble with his urinary organs.

He insisted on having an operation performed for his relief, notwithstanding the gravity of the procedure was laid fully before him. At the time of the operation, however, doubts arose in the minds of some of the consultants present that the kidney might not be involved, as the functions of the bladder had all along, and were now, being well performed, and the introduction of an aspirator through the loin into the supposed kidney cyst showed no fluid accumulation, "though the latter was accounted for by the small calibre of the instrument." I therefore made an explorative incision through the linea alba, which revealed a large, firm tumor, involving nearly the whole abdomen, with no sign of pedicle, extending up to, and pushing upwards, the diaphragm; the right kidney could be felt and the attachment of the cyst wall along the spinal column and the wall of abdomen; now, passing a large trocar through the

loin into the cyst, a considerable quantity of thick ammoniacal fluid was evacuated, but notwithstanding our efforts in this direction, the tumor was very little diminished in size. The character of this cyst, its bulk and universal attachments, would have rendered any attempt at its removal futile.

The wound was slightly enlarged, a rubber drainage-tube inserted, and the parts dressed in the most thoroughly antiseptic manner. Death took place in fifty-eight hours. The post-mortem showed tumor occupying whole of left abdominal region and filled with broken-down kidney tissue and a large quantity of soft, granular matter, of a red and yellowish-white cheesy nature. It was thought by all present to be the longest kidney cyst they had ever known of.

From our errors in diagnosis and fatal results of our operations, when honestly and conscientiously performed, are we benefited as much as by our success.

CASE 2.—Caries of ankle—excision—good result.

Maria N., colored, aged 17. Admitted with foul ulcer just below and a little in front of external malleolus, with fistulous openings leading down to déad bone. She states that some months previous to her admission she had a fall and twisted or sprained her ankle. It became very much swollen and painful, and she was unable to walk; soon after ulceration took place, and, after unavailing efforts to heal it and much suffering, she applied at the Hospital for relief.

Operation.—A careful examination showed a large carious condition, apparently confined to the calcaneum; a tongue-shaped flap was therefore dissected up from over the diseased part, the base just above and including the external malleolus and the point coming down to edge of sole; the soft structures were then detached from the bone. The ordinary trephine seeming to me to be well adapted to do efficient work in this case, it was very satisfactorily used; after removing a pretty deep section of bone the cavity was enlarged with the chisel and well scraped out with the gouge, until every particle of the granulations were removed; from the measurement made the excavation was carried almost completely through its diameter. The bone-cavity was soon thoroughly syringed out with the sublimate solution and packed with iodoform gauze and wound recovered by the flap, the latter, however, sloughed off in

consequence of its unhealthy condition, leaving a large open wound, which gradually filled up with sound new bone.

The girl has made a good recovery, with only a slight inward inclination of the foot and a little hitch in her gait, which is almost imperceptible, and will in time entirely disappear in all probability.

Excisions practiced upon the ankle-joint are very infrequently attended with satisfactory results, and in excessive inflammation consequent upon fractures and dislocations leading to necrosis, the usual resort of the surgeon is amputation of the lower part of the leg.

In regard to the great importance of removing every particle of diseased tissue in bone surgery, and the want of success on the part of many surgeons in not doing so, is well noted by a prominent American surgeon on a recent visit among the surgeons of Europe. In speaking of Prof. Kœnig, of Gottingen, the foremost of the great German surgeons, and his wonderful success in the treatment of osteomyelitis and tuberculosis of bones, he says Kœnig attacks these structures boldly and fearlessly with his chisels and large spoons, and does not close the wound unless he has satisfied himself that the object of the operation, the removal of the granulation tissue has been accomplished. He is a firm believer, moreover, in the antiseptic and anti-bacillary effect of iodoform.

CASE 3.—*Excision of elbow-joint for caries.*

Isaac C., mulatto, aged 16. Admitted September 30th. On admission the arm and joint were much swollen and tender, with fistulous tract leading down to lower end of humerus. A short time previous he had received a blow from another boy with a stick on the arm. The other arm and hand were deformed in consequence of severe burn received in childhood.

I thought it best to operate at once, as a destructive inflammatory process was going on rapidly in the bone and tissues. The operation was made after the method advised by Von Langenbeck, viz: the incision was carried along the posterior aspect of the joint, through the tendon of the triceps muscle towards the inner condyle, for a distance of at least four inches, two inches above and two below the centre of articulation. The olecranon was removed with the chisel, care being taken to hold aside the ulnar nerve with

tenaculum. The joint being now exposed, the head of the radius and ulna were freed from their attachments and pushed through the wound by bending the forearm upwards. The chain-saw was used in taking off the heads of these bones, avoiding the insertion of the biceps flexor and anterior brachial muscles, so that flexion might not be impaired. On sawing through the articular end of the humerus I noticed pus cells in the interior structure of the bone, so I removed another piece above the condyles.

The wound was thoroughly injected with the bichloride solution, closed and rubber drainage-tube inserted. The arm was then placed in a semi-flexed position in felt splint, with fenestra at seat of wound.

As the cure progressed passive motion was kept up from time to time, and the patient was discharged with good fibro-ligamentous union and very fair arm-motion.

NEW YORK LETTER.

INTUBATION vs. TRACHEOTOMY — OPERATION FOR RADICAL CURE OF VARICOSE ULCER OF LEG.

It was your correspondent's privilege, recently, to witness the two operations of tracheotomy and intubation of the larynx under circumstances which afforded a most excellent opportunity for contrast and comparison. In both cases the operations were for the relief of impending suffocation from the croup—the children were both about the same age—six years—the stage of the affection was about the same, and the symptoms almost identical. A very radical difference existed, however, in the apparent vitality and strength of constitution of the two children. The case upon which a tracheotomy was done (Mary M., of 54th St.), occurred in the practice of Dr. Kinch, of this city, and had been under treatment for two days, the symptoms developing with progressive, increasing severity, in spite of appropriate treatment pursued most energetically. The progress of the case and the development of marked cyanosis, together with

extreme dyspnœa, made evident the fact that nothing short of a radical operation of some sort could be depended upon to save the child's life. Dr. A. H. Goelet, of 54th St., was called in consultation, and it was decided that tracheotomy should be done as a last resort, and at once. The writer was called in to assist in the operation, which was done successfully under thorough septic precautions by Dr. Goelet, with the patient under chloroform. The urgency of the case and the imperative necessity for an operation, may be appreciated when it is stated that the dyspnœa was so extreme that the child actually stopped breathing repeatedly, both before and during the operation, necessitating a resort to artificial respiration to sustain life. The operation, which was done according to the usual method, was, as I have said, successful. Respiration almost immediately became normal, the pulse became stronger and the cyanosis disappeared. The temperature of the room had been carefully regulated and proper provision made for the presence of sufficient moisture in the atmosphere. The vigorous health and freedom from hereditary taint which characterized the child's constitution justified a comparatively favorable prognosis, especially as the operation had been attended with no hemorrhage, no shock, and had been followed by such immediate relief. We left the little patient sitting up in bed bright and comfortable, and very much astonished at her sudden, and, to her, inexplicable, loss of the power of speech. Appearances were deceptive, however, for in less than twenty-four hours the child had developed a violent double pneumonia, and in four days she was dead.

Case No. 2 occurred in the practice of Dr. A. H. Goelet, of 54th St., this city. Johnnie O., the patient, a boy some six years old, had been scrofulous all his life. Pale, flabby skin, enlarged glands, rickety legs and chronic scrofulous ophthalmia made up a train of symptoms which allowed a positive diagnosis. The child had been delicate from birth, and frequently recurring attacks of illness had brought him under Dr. Goelet's professional observation quite a number of times during his life. Just ten days after the tracheotomy case referred to above, Dr. Goelet was called to this child Johnnie, and found him suffering from true membranous croup. The patient was at once placed upon mercury bichloride 1-24 gr. every two or three hours, and medicated steam inhalations were used with a spirit-lamp steam-atomizer at frequent intervals.

The case progressed slowly, however, from bad to worse, and it soon became evident from the rapidly increasing cyanosis and dyspnoea that the child would die of suffocation unless some radical measure for relief should be adopted. An intubation was decided upon, and Dr. O'Dwyer, the originator of the operation, was sent for to introduce the tubes. The child was markedly cyanosed, breathing with extreme difficulty, and presented the typical restlessness and nervous anxiety so characteristic of the suffocative stage of true croup. The operation of intubation, which is wonderfully simple as done by Dr. O'Dwyer, gave instantaneous relief. The cyanosis disappeared, the breathing became regular and the restless anxiety gave way to a condition of quiet comfort. Up to this point the result in both cases had been the same. The immediate results of the two operations had been relief, but here the similarity ended. Case No. 2 made a somewhat tedious, but eventually perfect, recovery, and the child to-day is as well as at any time in its life. The value of intubation was most plainly shown in this case by the effect produced upon the child's respiration when the tube was withdrawn about forty-eight hours after it had been introduced. Five minutes after the tube was withdrawn the dyspnoea and cyanosis had developed to a degree which threatened immediate dissolution, and the child would have been dead, undoubtedly, in less than half an hour if the tube had not been reintroduced immediately. The relief was quite as prompt as in the first instance. The operation, as described by Dr. O'Dwyer, consists essentially in the introduction, as is well known, of a small silver tube into the larynx through the natural opening. These tubes are made in three different sizes, according to the age of the patient. They are nearly straight, with only a slight curvature towards the upper extremity, which is shaped like the opening to the larynx, and which is covered over by the epiglottis. This upper extremity has a flange-like rim around its border, which serves to hold it in position. It is also pierced with two holes or eyes, through which threads are passed. These threads are for withdrawing the tubes should the first attempt to introduce them prove unsuccessful, or in case the tube is accidentally introduced into the pharynx. But for this precaution the child might swallow it, though this would be no serious accident, as it would very probably pass harmlessly out via rectum in from twelve to twenty-four hours. A gag is used to keep the mouth open, and an

instrument has been devised by Dr. O'Dwyer with which to introduce the tubes. These instruments, with one other, to withdraw the tube after it has accomplished its purpose, constitute a complete intubation case, and with a little skill in manipulation, which can be acquired only by practice, you have one of the most valuable agencies for the relief of suffering and the prevention of death in a most horrible form within the whole medical armamentarium. The limited scope of my letter will not admit of an extended discussion of the comparative merits of the two operations, nor do the two cases cited afford sufficient data to justify a final decision as to their respective merits. The fact I wish to call attention to, and with emphasis, is that in very many cases in which the dangerous, and nearly always fatal, operation of tracheotomy has been adopted heretofore, much better results may be obtained by intubation, an operation simple and absolutely free from danger. For a discussion of the subject, which will be found both reliable and comprehensive, I refer the reader to a pamphlet written by Dr. O'Dwyer, which may be had upon application, enclosing stamp, free of other charge.

RADICAL CURE FOR VARICOSE ULCER OF LEG.

Very many of the surgical writers and lecturers of to-day refuse to recognize or acknowledge the affection referred to in the above title. Such an ulcer is said to be eczematous by some, with a complication in a varicose condition of the veins. From a pathological standpoint it may be as well to adopt such nice distinctions, but practically the term varicose ulcer has so many advantages that it is likely to continue in use for many years to come. It was my misfortune while a practitioner in North Carolina to have at different times four such cases under treatment, and I make the candid acknowledgment that I succeeded in permanently curing only one case out of the four. In two of these cases the ulcer was located on the anterior surface of the leg, in one upon the inner side just above the ankle, and in the fourth case, in which there were two ulcers, both were upon the antero-lateral surface of the lower third. In all four there was marked varicosity of the veins. In every case I adopted some form of constitutional treatment, and locally I exhausted every method with which I was at that time familiar, including elastic bandages, scarification, cautery, more or less severe, and local applications innumerable, including bismuth,

calomel, oxide zinc, iodoform, tincture benzoin, carbolic acid, tannin, etc., etc., *ad infinitum*. I succeeded in every case in bettering the condition temporarily, and in every case there was a "cessation of hostilities" on the part of the ulcer under treatment for a time, at least, but in three out of the four the ulcer broke down again. The case which I refer to as permanently cured has been free from trouble for three years, but he is wearing an elastic stocking all the time, and I feel sure that but for its support there would be a return of the trouble. The operation for radical cure consists in the obliteration of the varicose veins leading to or from the ulcer, and I feel justified in believing it a valuable method from the successful results obtained in four cases recently operated upon by Dr. A. H. Goelet, of this city, with whom the writer is associated in practice. I shall cite one case only, the last one operated upon: January 26th last Miss Ridley, æt 29, consulted the writer at the Metropolitan Hospital and Clinic on 48th St. (a private institution, controlled by Dr. G. and your correspondent), for the relief of a chronic ulcer of the leg associated with a varicose condition of the veins, or, in other words, a varicose ulcer. The ulcer first appeared as the result of an injury seven years ago. The patient had consulted several physicians and had been an inmate of the New York Hospital, the Roosevelt Hospital twice, and one or two others. The entire anterior and inner surface of the leg was a mass of hard cicatricial tissue, and the effect of frequent contagion had been to utterly destroy the identity of the original tissues. The ulcer would disappear under treatment only to appear again in a different situation. The surface of the ulcer, which was on the inner side of the leg just above the ankle, covered an area about three inches square and presented a raw, angry appearance. It was covered with a thin watery secretion, slightly purulent and occasionally streaked with blood. After cleansing the surface thoroughly with a solution of mercuric bichloride 1 to 4000, a dry dressing of iodoform was applied, covered with a roller, and the patient directed to return the following day to meet Dr. Goelet for the purpose of consulting as to the advisability of an operation. Obliteration of the varicose veins, it was decided, afforded the best chance for a cure, and the operation was appointed for the next day. The patient was put under ether, three of the large hypertrophied deep veins were carefully dissected up, a section about two inches in length of each was obliterated, the ends tied, drainage-tubes inserted and the wounds closed with continued catgut suture. Two smaller superficial veins were tied subcutaneously.

A solution of bichloride of mercury, 1 to 4000, was kept constantly playing upon the surface operated upon from a fountain syringe. The dressing consisted of iodoform covered with corrosive sublimate gauze and cotton, over which a roller bandage was passed, holding the dressings firmly in position. The dressing was removed on the seventh day, when it was found that the surface of the ulcer had dried up completely and the wounds made in the dissections had healed nicely, with the tubes almost entirely free from pus. The drainage-tubes were withdrawn and new dressings put on as before. These were removed five days later, showing complete union in every wound and a dry, slightly pale surface, with healthy granulations where the former ulcer had appeared. The patient has made an uninterrupted recovery, and is now, four weeks after the operation, able to work without discomfort. Only one case is cited in detail from the fact that the history in each of the other three was identically the same, so far as the result of the operation was concerned.

Obliteration of the veins is not a popular procedure in the hospitals of New York. I do not remember to have seen it done in a single instance, and yet I see no reason why such should be the case. The theoretical objection has been advanced that obliteration of some of the veins threw a more violent strain upon those remaining and induced a varicose condition in veins which before were healthy. This result has not occurred in any one of the four cases cited, two of which were operated upon more than three years ago. The collateral circulation was established readily and perfectly in each instance. Another objection has been urged in the danger of phlebitis, but thorough antisepsis will reduce any such danger to the minimum. The success attained in the four cases cited justifies a further trial, and I, for one, shall rely upon the operation as the most effective means of curative treatment until something better shall have been given to the profession.

METROPOLITAN MEDICAL MEDLEY.

The College of Physicians and Surgeons, or Vanderbilt's College, as it is called, heads the list this year with 800 matriculates; the University runs a close second with over 700, with Bellevue not far behind in the third place.

It is estimated that there are 12,000 of the population of our city engaged in the art medical. This estimate includes Allopaths,

Homeopaths, Eclectics, Thompsonians, Faith Cure doctors, Electricians, Veterinary Surgeons and "Dog Doctors." Of the regular Allopathic school there are about 4,000, very many of whom are specialists.

The professional income of many of our most celebrated New York doctors would make a North Carolina country doctor open his eyes in astonishment. Dr. Thomas, the justly eminent gynecologist, is said to command an income from his practice of from \$50,000 to \$60,000 a year. Dr. Emmett's is only a few thousand less. Drs. Fordyce, Barker, Loomis, Hammond, Jacobi, Sayre, Agnew, and perhaps others, are said to command incomes of \$40,000 or more annually.

There is no arbitrary fee bill observed in practice here. It is customary to charge in proportion to a patient's ability to pay, or, in other words, to "size up" a patient's "pile" and charge him all he will stand. The average fee for an ordinary call is perhaps \$3.00 or \$4.00, though usually it is \$2.50. Obstetric fees range from \$10 to \$1,000.

Physicians of experience here rate the financial standing of a patient according to his nationality. A German will pay his doctor's bill without a cavil and with commendable promptness; a Jew is also considered good pay, though he would belie his nationality if he did not haggle for a reduction. Very many of the Italians will pay their bills, though they invariably plead most abject poverty. The negroes of New York, to their credit be it said, in the majority of cases pay their bills with remarkable honesty. An Irishman will pay only when he cannot possibly avert it. Physicians here collect, on an average, from 85 to 90 per cent. of all accounts entered.

The legal requirements for practice here are objectionably simple. If you are a graduate of one of the local colleges, all that is necessary is that you show your diploma to the clerk of the county court and register first at his office, and then at the office of the Board of Health. If you are a graduate from a college in some other State, it is necessary that you should have your diploma, endorsed by the Faculty of some one of the local colleges, before you can register. No license, no examination, no red-tape. Perfectly simple and easy enough, but unfortunately the simplicity of the thing ends right there.

A New York doctor must know something of law as well as medicine, or he will be continually violating one of the many statutes which govern the health of the city. Every case of contagious disease, including measles, diphtheria, scarlet and typhoid fever, as well as

small-pox, cholera and yellow-fever, must be reported to the Board of Health. If you are called to a patient and find his house or apartments in a bad sanitary condition, you must report it at once to the same authorities. Every birth must be reported and every death also. If a patient dies from a blow or any violence received, either through accident or design, the case must be reported to the coroner, even though the patient's death occurred twelve months after receipt of the injury. There is a penalty more or less severe for violation of any one of these ordinances.

W. B. PRITCHARD.

TRAUMATIC TETANUS TREATED SUCCESSFULLY BY LARGE DOSES OF SALICIN AND BROMIDE OF POTASSIUM.—Dr. Henry T. Butlin reports the case of the cure of a traumatic tetanus by salicin and bromide of potassium—salicin grs. 20 every two hours. The first day's treatment improved symptoms and the interval between the doses was made four hours. Improvement continued for next few days, but several days elapsed before he was free from epigastric pain, and for nearly a fortnight it was necessary to draw off the urine. At the end of six weeks he was convalescent.

FALSIFIED VACCINATION STATISTICS.—We notice a report in the *Medical Times* giving the result of investigation into the statistics of Dr. Keller, chief physician of Austrian State Railway. They set forth, among other things, that there died amongst the vaccinated and unvaccinated people the same result, 13 $\frac{1}{4}$ per cent. For some ages the result was found to be a greater mortality amongst the vaccinated. For instance, the deaths between the ages from 4 to 5 among the vaccinated were 20 per cent., but from the unvaccinated only 15 per cent. All his statistics showed not only the usefulness but the danger of vaccination. Dr. Korosi, of Buda-Pesth, searched into these remarkable statistics, and has proved them to be gross falsification. This report was made to the last International Congress, and the committee appointed by that body to examine the paper and testimonial of Professor Korosi, declare that Keller's statistics are false, and from the evidence adduced the committee would be warranted in using stronger language. That the best things given to us should be defamed and belied by those who are their recipients is not a new phase of human corruption, but is very despicable. It would be well if it fell only upon the guilty, but false statistics fly on rapid wings, and slow truth may never overtake it, at least until great havoc results.

OTIS FREDERICK MANSON, M.D.

BORN IN RICHMOND, VA., 1822—GRADUATED IN MEDICINE 1840—MOVED TO NORTH CAROLINA IN 1841—MARRIED 1843—JOINED THE MEDICAL SOCIETY OF NORTH CAROLINA IN 1854—A MEMBER OF NORTH CAROLINA BOARD OF EXAMINERS IN 1859—REMOVED TO RICHMOND IN 1862 TO ESTABLISH MOORE HOSPITAL—PROFESSOR IN MEDICAL COLLEGE OF VIRGINIA IN 1869—DIED JANUARY 25, 1888.

Where medical education conducts one to a degree, his medical education is but fairly begun. If one's teachers have done their duty the principles of known truth are thoroughly indoctrinated, the young physician's powers and methods of observation are educated, and when he comes to the bedside of the sick he does so with some sense of responsibility, with some degree of independent thought, and with a mind open to the reception of truth. He looks back at his master's teachings, he looks forward to the unfolding of more truth, and a new stage of medical education is begun. Difficulties arise in his mind, if he be honest with himself, and upon these he must ponder and keep his own council, and seek the aid of his silent friends in his library. Here are dangers to the student, dangers to the doctor, but silent education the outcome. Should he have no thoughts of his own, if incidents do not set his own fertile brain to work, he may fall into the servility of author worship, and this is not bad should he master a great work, or a few of them: but otherwise shallow routinism follows, and the public he serves detects the lack of conviction, and so a career is ended before it has fairly begun.

The style of medical education half a century ago was that of dogmatism. When the master in a certain branch laid down a rule, it was expected to be followed, and following it to the bitter end

was a safeguard against hostile criticism and law-suits in the event of disaster. Clinical demonstrations, physiological demonstrations and the inculcation of original work were not taught. Such things were beginning to be talked about, and highly praised, but the men who dared to indulge in them must be screened behind their professional prerogatives, or expect to be snubbed and pilloried by very sedate and proper reviewers. A degree of intolerance, of which the profession was hardly aware, stifled the thoughts and actions of men who had much of the true spirit of science of to-day. When Dr. Horace Green, of New York, dared to treat a patient by applications to his larynx, he was savagely assaulted by the most renowned surgeon of the day, Dr. Valentine Mott, and his procedures pronounced malpractice, and it was declared to be an impossibility to apply medication to the larynx by means of an instrument. Its demonstration by the discoverer in the presence of competent witnesses mitigated but little the harsh sentence which the medical public had pronounced against him. Dr. William C. Norwood, of South Carolina, following some individual experiences, found that *Veratrum Viride* lowered the temperature in pneumonia, relieved the dyspnoea and cut short the disease, and reasoning from this too enthusiastically that he had found a substitute for the lancet in that disease, drew down upon his head such intemperate criticism that we read at this day with surprise. Dr. Marion Simms, after working out the difficult problem of curing a vesico-vaginal fistula, when his opponents could no longer assert that he was unsuccessful, proved, to their satisfaction, that the position in which he placed his patient for examination, his speculum, his silver wire, his wire-twister and all of his method had been stolen from so many sources that they could see nothing in the whole procedure that deserved the name of originality. Gifted men who had gathered some facts about our indigenous remedies and were applying them with practical success, found no room in our too respectable branch of the profession, but gave to Eclecticism such time, proved drugs as podophyllin and the numerous resinoids. Ephraim McDowell's cases of ovariectomy shocked and incensed the dignified surgeons of the day, and the eager men who dared to follow him were denounced as "belly-rippers."

Such was the spirit of the profession when Dr. Manson gained his M.D. from the Medical Department of Hampden-Sidney in 1840.

That all of the profession were not believers in the perfected knowledge of the masters, is exemplified in his career.

The gifts which education had developed in Dr. Manson were essentially those of independent observation. He entered upon his field of work as one who had caught the glimpse of the scientific method of to-day, and his observation and his studies were at once directed to practical things. Theories learnt had to be tested by practical application at the bedside. If they were false they were mercilessly discarded, but if true, then all zeal, all powers of concentration were brought to bear to extend the truth to its ultimate end.

Almost the first trial of professional manhood was a conflict with small-pox, if it be right to call it a conflict when one boldly enters in and conquers a monster when he has buckled on an armor in which he was confident. The work was loathsome, and to go from the atmosphere of a library where the young physician was waiting for work, into the disgusting atmosphere of negro cabins, where the air was laden with the foul odors of the foulest small-pox, was to be a test of fitness for his pursuit—a trial of his armor. Lives were to be saved for humanity's sake, for the dollar's sake—medical principles which had only been accepted on faith from the teachers were to be vindicated. Such work for elder confrères was distasteful—was repulsive—was rejected. Reasoning could not show it to be their duty, for the sake of a few negro slaves, to risk carrying the pestilence to their own homes and to the homes of their reliant patients. Were they not the guardians of the health of the wives and children of their generous patrons? and would it not be unpardonable to risk carrying pestilence among them? So the rejected work fell to the hands of the fledgling doctor, and lo! he was no fledgling. The mantle of Hippocrates had fallen upon the young doctor, and his youthful strength proved equal to the task. Dr. Manson at this period of his life had barely reached his nineteenth year. He was of spare figure, faultless in the neatness of his dress, his eyes black and animated, his face and forehead bearing the impress of intellectual endowments, his manner dignified and courteous, but ever joyous and attractive. If the young stranger made any impression at a casual glance upon the people in his new home, it was that he was dainty and genteel; if any boy-doctor ever took a community by surprise he did it when he threw off the garb of the city gen-

tleman and nobly took charge of loathsome cases of small-pox among negroes, which meant that he scorned his ease and was willing to isolate himself from his friends, to deny himself comforts, to endure the effluvia of pestilential bodies in being both nurse and doctor.

It was here the young doctor worked out for himself some of the practical problems of his profession. Probably he was now seeing his first cases of small-pox. There was no access to friendly counsel now, his patients must live or die by the advice and treatment he was able to offer them. In 1841 vaccination was a well established principle and practice, but supplies of vaccine could not be commanded at short notice, and there must be no delay. He resorted with promptness to inoculation, and with all the keen relish of a born physician he treasured up the lessons he was working out by experience. The writer of this has heard him relate the story of this first battle of his life, and recognized in it the fruits of a victory which served as the key-note of his after life—"Prove all things, hold fast that which is good." Ever after Manson was an authority on small-pox—its diagnosis, its treatment, its prophylaxis—and, above all, he was master of himself. When he came forth from the seclusion of the atmosphere of pestilence, he came as a full-grown doctor, the peer of the worthiest in the community.

An early success is not always the best thing for a young physician, indeed it often stunts professional growth by creating a false estimate of one's powers and enticing one to rest with the pride of one who had "already attained." Not so with young Manson—he was only beginning to learn himself, and the applause of his new friends only awoke the student's ambition to prepare for more solid achievements. Two years had now elapsed since he came into his new home a stranger, professionally, and he had won the daughter of a highly influential family for his wife at the early age of twenty-one.

As early as 1846 he began contributions to medical societies, and his studies from about this date, to the day of his death, were largely upon diseases of our malarial climate. At the date above given the use of quinine was in its infancy. Nearly all of the textbooks of the day were English, and this, together with the lectures from Northern teachers, who knew very little of our fevers, constituted the prevalent basis of practice. Quinine was given in doses,

for malarial fever and pneumonia, that we now know were almost inert. Indeed quinine for pneumonia was not a prevalent treatment. The stereotyped way in administering the drug was to give a teaspoonful of the official solution, containing a grain to the dose, every two hours, or, for more marked cases, two grains were given every two hours. The sedative effect of quinine was then just barely hinted at, and that only by a few physicians of the Southwest—Cartwright, McPheeters, Perrine and Metcalf—whose voice was not authoritative enough in that early day to impress the rank and file of the profession educated in the English text-books, and by professors who had little experience with the severe types of fever known to the Southern doctors practising in the river bottoms of the new Southern country. Diseases of a malarial character then constituted the bulk of Dr. Manson's practice, as it did that of all his contemporaries. To his own cultivated perceptions he began at an early day calling around him the silent counsel of books and periodicals, and storing his mind with all that was best. While he was learning men with a keen insight, so was his discriminating mind grasping the valuable and rejecting the trash. He had looked with unsatisfied longings to his old teachers, they had shown no evidence in their clinical portraiture that they had seen the malignant diseases now confronting him and carrying off patients in a few days, and as he stood sometimes aghast at his helplessness, he redoubled his studies of all these death-working processes, and boldly thought and acted for himself.

In 1856 the Medical Society of North Carolina, after a period of incubation, was emerging into active life. The best young physicians of the day were coming to its support. The yearly meetings were drawing nearer together the individuals of a scattered profession, and the annual interchange of thoughts and methods, and personal attrition of mind with mind, was building up a spirit of study and research which is bearing its fruits in our day. Dr. Manson had been but a short time a member of the Medical Society when he presented a paper on "*Remittent Fever*," and in the succeeding year, 1857, he followed it by one on "*Malarial Pneumonia*." Perhaps no paper is so well known in the literature of the medical profession of the State as this one. Dr. Manson was then thirty-five years of age, and had matured decided opinions about the pathology of pneumonia and the therapeutic action of

quinine in its treatment. To most of his hearers the doctrine of malarial pneumonia was not orthodox. The current belief was that Manson had made a new disease of an old one, and what he designated as malarial pneumonia was simply the concurrence of the latter disease with malarial fever. The controversy which ensued between Dr. W. T. Howard, in opposition of Dr. Manson's theory occupied the pages of the NORTH CAROLINA MEDICAL JOURNAL of its second and third volumes.

Dr. Howard's ability as a physician of large research and retentive memory, and his qualifications as a controversialist, were eminently demonstrated, but at this day, thirty years from the date of controversy, it is an undoubted fact that the practice set forth by Dr. Manson's original paper has been accepted as the best practice of the day, and his theory as to the existence of a pneumonia having its origin in malarial poisoning is practically accepted by a large number of the most intelligent physicians in the country. Nosological terms and systems change, indeed may even have their fashions, so that in one section of our country a physician speaking of malaria does not mean marsh miasm, but emanations from decomposing sewage. It is not infrequent either that one may have a preferred system of nomenclature, which, when attempted to be applied at the bedside to actual cases, could not be at all distinguished from that of another physician holding opposite views, inasmuch as the practice of the two, if they were equally well educated, would differ but little. This controversy, viewed from the present standpoint, was largely about terms and nosological differences, but demonstrated clearly that both parties were learned in medicine and skilled in polemics.

Practically, though, the two papers of Dr. Manson on "*Remittent Fever*" and on "*Malarial Pneumonia*" had a widespread influence. The writer of this then, for the first time, heard remarks in households that the doctors had brought back from the Medical Society a new way of giving quinine. Instead of the small doses strung along in the day, in cases of malarial fever, five-grain doses were carefully administered to anticipate the paroxysm of fever. The style of Dr. Manson's address was rather florid, not now common to scientific medical writers. But in that age of the Medical Society, when arts were being employed to attract the interest of the general public in the movement for better medical education, and when the

audiences were usually of a mixed character, fine writing was affected more than now. In fact, Dr. Manson had much of the flame of poesy in him, and the ardor of his nature often led him into ornate expressions, which, however, were never at the expense of the logical strength of his writing. Perhaps more than once was the flowing exordium of his paper on "*Malarial Pneumonia*" borrowed to grace the addresses of younger writers before our local societies. One instance is fresh in the mind of the writer, when an essay to be read before a medical society was looked forward to with some pleasurable expectation, it not only being upon "Cholera," a few cases of which had occurred in the community, but it was the maiden effort of a new-comer. Imagine the surprise of his audience when the speaker "approached his august theme with awe," "like an intruder into some sacred temple," using the very words of the familiar exordium of Manson. To all, these fine sentences were familiar, and the knowing glances which passed from eye to eye among the audience must have convinced the young essayist that the ear-marks of his paper were well-known, as he modestly framed an excuse which evaded the courteous invitation to allow a copy for publication.

In 1859 Dr. Manson was chosen by the Medical Society of North Carolina as a member of the first Board of Medical Examiners organized in that year. His associates were the following: Dr. James H. Dickson, of Wilmington, the scholar, the philanthropist, the Christian gentleman, the martyr to yellow fever; Dr. Charles E. Johnson, of Raleigh, the great-hearted philanthropist and author of a work on the Jurisprudence of Insanity, Surgeon-General of North Carolina; Dr. W. H. McKee, of Raleigh, the beloved physician who carried sunlight and comfort into so many homes of suffering and sorrow; Dr. C. Happoldt, of Morganton, who fell in the yellow fever epidemic in 1878; Dr. J. Graham Tuill, of New Berne, who united his fortunes with the North in the great civil war, and Dr. Caleb Winslow, of Hertford, whose contributions grace the pages of the old NORTH CAROLINA MEDICAL JOURNAL. Alas! all are now numbered with the dead, but they gave the impress of their character to the work inaugurated with so many misgivings, and blazed out the way which has been followed with increasing success since their day.

The outbreak of the civil war found our people utterly ignorant

of the great duties which the havoc of battles would bring upon them. There were military leaders enough and of great skill, but the means for the care of the wounded after a great battle, even for the sick from the camps, were rudimentary. The medical profession of the South had all been accustomed to the peaceful lives of general practice, and surgery was confined to amputations, occasional lithotomies, needle operation for cataract, and Marion-Sims' operation for vesico-vaginal fistula. Dexterous surgeons were very few. North Carolina organized with commendable promptitude, having its own separate medical department under the Surgeon-Generalship of the beloved Dr. Charles E. Johnson. There was a great lull in the South after the Battle of Manassas, during which time both armies were reorganizing, preparing for the great contest which was to be waged for the possession of Richmond. All the power of the Confederacy was concentrated around its new Capital, and that city was becoming a huge collection of hospitals. The Seven Day's Battles around the devoted city in June, 1862, had filled every hospital and private house with wounded men. Governor Vance was then presiding over the destinies of North Carolina, and was rapidly developing those abilities which placed his State foremost among her sisters for far-sighted care of her troops in the field and for the wounded of her army in the hospitals. It was determined to establish a hospital for North Carolina soldiers in Richmond, and Governor Vance selected Dr. Manson for this important position. In July of 1862 he came to Richmond on that mission, and selected a tobacco warehouse on Main street just above Rockets, naming it the Moore Hospital in honor of the Surgeon-General of the Confederate States. The building is now standing. It was a three-story brick structure, and, like all the numerous houses of the sort in Richmond, abundantly lighted by windows. The organization of this Hospital was proceeded with vigorously. The State poured out its supplies as lavishly as the growing scarcity of material would permit, and beyond what the State could do, the patriotic women sent of the luxuries an abundant supply, denying themselves everything for the sick and wounded.

In July 1862 the writer of this reported at the Moore Hospital as a convalescent from Chickahominy fever. He found the organization in an incomplete state, but noticed with pride the ardor of the Surgeon-in-charge, and the skill with which he was overcoming the

difficulties of his new position. He had purchased the entire dining outfit of the "Curtis Peck," a passenger steamboat which once plied between Richmond and Norfolk, and had secured the services of Captain Freeman as victualler and general caterer of the eating department. On the lower floor were the offices of the Surgeon and the Hospital Steward, and bed-rooms and linen rooms and provision rooms partitioned from the main space. This main room served as a general dining-room for the sick and convalescent, and around its well-filled board the soldiers of North Carolina were fed in a style that rivalled the best hotels of the day. The Hospital had a capacity for about 150 patients—entirely too small for all of our wounded, but admirably conducted in all its details.

The name of the Hospital was chosen by Dr. Manson to compliment Surgeon-General Moore, but in doing this he had defeated the intention of the Surgeon-General to name a larger hospital, probably Camp Winder, after himself. This, together with some conflict of authority on the part of North Carolina as to the commission of medical men appointed and holding her commission, engendered a strife which was exhibited on sundry occasions as the war progressed. The Moore Hospital was abundantly supplied with everything needful, which led the Surgeon-General to send a demand that from these supplies there should be contributed a certain part to go to other hospitals more needy. In all the strife and conflict Dr. Manson bore his part with firmness and dignity.

It was ordered by the Surgeon-General that the names of hospitals should be dropped and that they should hereafter be designated by numbers, and in this numbering, Moore Hospital was made No. 24.

It is fresh in the remembrance of the writer what an atmosphere of comfort prevailed in the office of Surgeon Manson. His fine library had been brought to Richmond and set up in his office, and to a private soldier who had been enduring the dirt and misery and dangers of the camp and field, and who also once had a taste of the literature of medicine, the sight was a rare one. It is not exaggeration to say that this was the finest medical library ever in North Carolina at that day, and it was then doubtless the richest one in the city of Richmond, where were congregated the best medical men of the South. Authors the writer had often seen cited in the foot notes of his text-book were here displayed in all the

amplitude of their neat bindings—Louis, Andral, Grisolle, Giacomini—French, English, Italian and Latin tomes, which his agents in Paris, Baillière & Bros., poured in upon his shelves, until there were twelve hundred volumes. The writer remembers how he fairly gloated over the handsome folios of Lebert's "*Traité d'anatomie pathologique*," and "Bernard and Huet's Surgery," and hundreds of others known to fame, but seldom within the reach of medical students—most of them strangers even to the old practitioner. It was in this library that a friendship sprung up on the part of the scholar who had brought these choice volumes together and the writer, a friendship which continued until his last days. Always ready to encourage young men who desired to study, he opened up the treasures of his books to the writer, and made him welcome on every occasion where knowledge of medicine was to be gained. How he adopted him into his medical family, how he secured from the Secretary of War a detail for him to attend lectures at the Medical College of Virginia, and finally his invitation to go before the Army Board for a medical appointment, is recorded here with gratitude as one of a few of the many acts he found pleasure in bestowing upon the young aspirants for professional honors.

The library of which we have spoken as being so rich and complete, was not a vain show. Although the turmoil of war was enough to engross the attention of most men, he found pleasure and profit in his books day by day, applying himself to study, and in addition to professional matters kept his knowledge of Latin and Greek fresh by pursuing a course of study with his eldest daughter, a handsome and gifted young lady.

Even in that city, where there was a large collection of doctors from all parts of the South, Dr. Manson was well known. He made no claims to special dexterity as a surgeon, but a successful resection of the shoulder-joint, performed on the person of a young Virginia soldier—Billy Rickets—was among the first of this afterwards fashionable operation, and was contributed to the *Army and Navy Surgeon's Medical Journal*, then conducted in Richmond by the learned Dr. Middleton Michel, of Charleston.

Dr. Manson's views of the therapeutics of quinine were soon known in Richmond, and were met with much warmth of opposition, as may be evidenced by the fact that Dr. David H. Tucker, then Professor of Medicine at the Virginia Medical College, said in one of his lectures:

"Why, gentleman, there is a North Carolina doctor here in this city who, I am told, says he can cure pneumonia with quinine," a piece of sarcasm which showed that Dr. Manson was an innovator in the use of this drug in the treatment of pneumonia, a practice which has since become well established.

So well were the interests of the State subserved by Dr. Manson, that Governor Vance appointed him Medical Agent for North Carolina, under which commission he founded a refreshment house for the soldiers of this State going to and from the army. This excellent institution was under the immediate care of Dr. S. W. Murphy, a young man who had been under the friendly tutelage of Dr. Manson, who had served as Ward Master at Moore Hospital, finally graduating at the Medical College in Richmond. Dr. Murphy afterwards became the founder of the Rugby Academy in Wilmington, Delaware, where he achieved success. The economy of management, the satisfactory way in which food was prepared for hungry travellers going to and from the battle-fields, won for Dr. Manson the admiration of the whole State, and Governor Vance publicly expressed the great satisfaction which he felt for his eminent services.

When the war ended he remained in Richmond as his permanent home. He was elected Professor of Physiology and Pathology to succeed Dr. Levin S. Jones, in 1869. He afterwards became Professor of the Practice of Medicine, continuing his connection with the College until 1882. During all his busy career as army surgeon, college professor and private physician, he was a student. His library was his favorite resort, and his graceful pen was ever devoted to recording his experience. As a student he was exhaustive, as a penman all of his motions were graceful and elegant, as his manuscript lectures and letters show.

In 1882 he published a small volume entitled "*A Treatise on the Physiological and Therapeutic Action of the Sulphate of Quinine.*" This work embodies, in addition to the history of the introduction of quinine and the researches of the work of therapeutists of the various schools, the author's peculiar views on the action of the drug. He points out that the primary action of quinine is "upon that portion of the medulla oblongata from which the auditory nerve arises," and by studying these effects he was enabled to deduce the observation that that small space in the nervous centres, from

which the auditory nerve takes its origin, is "the hyperesthesial region of quinal intoxication." Further he says: "It may be regarded as a self-evident proposition that malaria is a *materies morbi*, which, being absorbed by the blood and conveyed throughout the system, manifests a special affinity for the nervous system." He does not regard quinine as an antidotal agent against the toxic power of malaria, but as an agent which "obtunds, stupefies the impressionable centre, and renders the action of the poison ineffectual." This paralyzant effect being accomplished, the system is afforded time to eliminate the noxious agent. Only a brief hint is here given of the author's theories, but all through the excellent essay will be detected a thorough familiarity with Morton (1737), Werlhoff (1775), Torti (1821), Senac (1759), Cleghorn (1768), Chomel (1821), Gintrac (1853), Giacommini (1840), Bailly (1825), and all the older authors which abounded in his library, and scarcely a paragraph escaped him, which was written by Southern authors on the application and effects of quinine. He accords with frankness to Dr. H. Perrine, of Alabama, the first publication (1826) of the sedative effects of quinine, but it is evident from his writing that he had been employing the drug upon this principle for some years before he was aware of the writing of Dr. Perrine. Dr. Manson gave to his own child (nine years old) a sedative dose of quinine in scarlatina, on the principle of its known value in "diffusing animal heat, besides its calming and sedative effects," and had the satisfaction of seeing him recover from this severe fever, it being a practice not at all established by experience, and until he came across the item of its employment by Morton in 1737, he was not aware it had been previously employed in scarlet fever.

In 1886 Dr. Manson contributed an important "Treatise on Malarial Hæmorrhage," embracing all the hæmorrhages known to occur in the course of malarial seizures. His erudition on this subject was very remarkable, and it can be truly said that there are but few private libraries that could have furnished the volumes there quoted. In this essay Dr. Manson was of the opinion that the cause of renal malarial hæmorrhage was the presence of *Billharzia*, a proposition which he had not had the means of demonstrating, although it is plausible and well worth careful investigation.

It will be seen by this sketch of the literary career of Dr. Manson that a large part of his studies were devoted to fevers of climatic

origin, their prophylaxis, etiology and treatment. Few students of his day were in hearty sympathy with him, as few of them had had so extensive an acquaintance with the venerable authors of the past, and consequently could not comprehend the accumulation of facts, new and old, which make up the sum of recorded knowledge. Intense application to one topic gave the impression to some that Dr. Manson was an unsymmetrical student, but this opinion did not gain ground with friends who had the privilege of knowing him more intimately. His powers of thought were deeply cultivated, and his versatility of learning was great. His independence of thought brought much opposition to his medical teaching, but in spite of lengthy controversies his theories, and especially his practice, have stood the test of time, and fairly rank him with Dr. S. H. Dickson, of Charleston, Dr. George B. Wood, of Philadelphia, and Dr. Daniel Drake, of Ohio. What he has done for the literature of medicine may not now appear, but in time to come the studies to which he devoted the best powers of his trained intellect will serve to shorten the labors of students, in furnishing a well digested view of the mass of learning which lies buried in volumes antique and little accessible except to the veteran book-hunter.

No attempt will here be made to complete a bibliography of his writings, but we trust that the large material which he so skilfully and laboriously collected towards "A History of Fevers from the Earliest Times" may be kept together until some student of equal ability may be found to complete the great undertaking.

North Carolina is proud of his distinguished abilities, which have left their impress upon her medical profession, and with the medical profession of our sister State we unite in placing this tribute of respect upon his fresh-made grave.

THOMAS F. WOOD.

BOURDEAUX (*Arch. Med. Belges*) says that fluid extract of quebracho, applied to a wound, a burn, an ulcer or a frost-bite, is more healing even than iodoform. Spread over such a surface, it dries in the course of half an hour, forming a tough and very adhesive brownish crust, which can be removed only with the aid of warm water; and cicatrization advances rapidly.

SELECTED PAPERS.

THE USE OF SACCHARIN IN DIABETES.

By CHARLES W. PURDY, M.D., of Chicago, Illinois, Hon. Fellow of Royal College of Physicians and Surgeons, Kingston, Ontario.

Sufficient time has now elapsed since the introduction of saccharin to permit extended observations of its physiological effects upon the organism, as well as to learn something of its therapeutical properties. This time, happily, has been improved by numerous observers, especially by Stahlman, Salkowski, Stutzer, Adducs and Leyden, to whom we owe much of our knowledge upon this subject.

We know that this agent is absolutely innocuous to the system, even when administered in sufficient quantity to equal in sweetening power three pounds of sugar a day, and continued indefinitely. The fact that large contracts have recently been made for the supply of saccharin for military use, both by the German and the Russian governments, indicates clearly its harmlessness as a flavoring agent for food and drink.

With an agent so harmless, and possessing a sweetening power more than three hundred times that of sugar; we naturally turn to diabetes as a useful field for its employment; since the deprivation of sugar—always so essential in successfully treating these cases—is often one of the severest trials to the patient in the enforcement of the diabetic dietary. Simply as a flavoring agent saccharin leaves little to be desired as a substitute for sugar, save its sparing solubility. It is of course entirely devoid of nutritious properties.

From a liberal use of saccharin in my practice since its introduction I have not yet met with a single instance in which its palatability was suggested as in the least inferior to that of the purest sugar.

The most desirable form for the use of saccharin by diabetic patients is that of tablet; since in this form a combination may be made—usually with an alkaline carbonate—which renders the saccharin perfectly soluble in water. I have made numerous trials and experiments with the several forms of saccharin tablets at present on the market, both here and in Europe. Most of these have been found quite soluble, but they contain rather an excess of saccharin, which I think in

some respects objectionable. From a grain to a grain and a half of saccharin will render a cup of tea or coffee about as sweet as will two lumps of white sugar; and I find that while most patients crave the flavor of sugar, some resent an excess of it, and therefore the tablet must be broken—and consequently in part wasted—in order to get the desired grade of flavor. The tabloids I am now using are made for me by Parke, Davis & Co., of Detroit, and contain each 25 milligrammes of saccharin, in the shape of soluble salt, and these give entire satisfaction.

In addition to its use as a flavoring agent for food and drink, saccharin possesses properties that render it valuable as a medicinal agent in the treatment of diabetes. It possesses decided antiseptic properties, estimated by trustworthy observers about equal to that of salicylic acid and thymol. On the other hand, saccharin exerts no action on ptyalin or pepsin, and, moreover, it seems to have no secondary action on the digestive secretions—passing unchanged through the organism, to be eliminated by the kidneys, as do benzoic acid and resorcin—imparting its antiseptic properties to the urine.

In diabetes, as is well known, the necessary ingestion of a food mostly of a nitrogenous character often weakens the digestive power of the stomach and flatulent dyspepsia is the result. Now in saccharin we possess an agent that very much retards the abnormal fermentative changes in the stomach; and its tendency, therefore, is to preserve the food from such changes until the tardy flow of gastric juices finally reaches and digests the whole contents of the stomach—just as does carbolic acid, and such agents relieve flatulent dyspepsia.

We are perhaps justified in looking for another possibly beneficial action of saccharin in diabetes, based upon its antiseptic properties, though thus far our knowledge rests mostly upon a theoretical foundation. When we consider the strong tendency to fermentative action in the blood of diabetic patients, as is evidenced by the frequency of multiple furunculus and anthrax, as well as Kussmaul's coma; we can scarcely resist the conviction that the passage of such an antiseptic as saccharin through the blood—especially in large doses—cannot but have a modifying influence upon these fermentative changes. Theoretically, then, at least, saccharin, if given in considerable quantities, might be expected to exert a most beneficial influence over those blood changes in diabetes, from whence spring complications comprising the most serious and fatal features of the disease.

In brief, then, we are justified in the following conclusions in reference to the use of saccharin in diabetes :

1. That in this product we possess a flavoring agent for food and drink the palatability of which is quite equal to that of the finer grades of sugar, and which may be used by diabetic patients with the greatest impunity.

2. That through its antiseptic properties it retards the abnormal fermentative changes in the stomach so common in diabetic patients—thus promoting digestion and relieving flatulence.

3. That while as yet we are without sufficient practical data to judge of its blood effects in large doses to diabetic patients, yet both chemistry and physiology would indicate its use for the purpose of favorably influencing some of the more fatal complications of the disease.—*The Journal of the American Medical Association.*

FIFTY APHORISMS IN PREGNANCY.

By E. J. KEMPF, M.D.

1. *Introduction.* “In such a manner we can cover a vast field in comparatively a short space of time. It is, too, a very useful way of imparting and receiving information. It is, of course, in its very nature, dogmatic, as it offers no proof for its assertions, but it is presupposed on such a subject as this that the evidence on all sides has been weighed, and we can judge how far the propositions laid down accord with our several convictions. It is, too, a very natural way of imparting intelligence. Aphorisms form the method we use continually in conversation, where we first of all state our propositions positively, and discuss them afterward, if there be any necessity.” I shall be glad, indeed, if any reader will do me the honor to dispute any proposition I may make, that the truth may better be arrived at.

General Aphorisms. 1. “The safest plan is to consider every woman, whether married or single, who comes to you for treatment, as pregnant until you have satisfied yourself to the contrary.”

2. The physician or midwife should inform himself or herself all about the patient's former labors, general physical status, condition of lungs and heart, etc., the presentation and position and condition of

the child and the location of the placenta by external manipulation, several weeks before delivery."

3. "To find day of confinement, take last day of menstruation, say February 10th, count backward three months to November 10th, and add seven days = November 17th. An exact reckoning of the date of confinement is impossible, errors of one or two weeks being sometimes made."

4. Direct the pregnant woman to (1) keep the bowels regular, (2) that the diet be plain and nutritious, (3) to take frequent baths, (4) not to get cold or wet, (5) to take moderate exercise, (6) to do the usual light housework, (7) to be in the open air often, (8) not to worry or get excited, (9) that the dress should be warm, loose, and there should be no pressure on the breasts, waist or abdomen, (10) to wear an abdominal bandage, (11) to bathe the nipples in some astringent solution if they are sore, (12) to consult the family physician for any indisposition. (Munde.)

5. Moderate coition is allowable during the first seven months of pregnancy, and fondling of the breasts and nipples by the husband during the latter months is advisable. (Späth, *Geburtsenkunde*, 1857.)

6. *Signs and Symptoms of Pregnancy.* Morning sickness occurs during the end of the first month, the second and third months, and sometimes during the fourth and fifth months. Occurring after that, it is probably abnormal. (Munde.)

7. Menstrual suppression is the rule during all the months. The menses may occur during the first, second and third months, rarely afterward. Conception may occur when menstruation is normally absent, as in young girls before menstruation is established, and after the change of life and during lactation.

8. At the beginning of the third month mammary areolæ become turgid. This is not a reliable sign, as it may occur in uterine or ovarian disease. (Playfair.)

9. Abdomen begins to enlarge during the third month, and becomes marked during the fourth, when the uterus rises three fingers' breadth above the symphysis pubis; during the fifth it occupies the hypogastric region; during the sixth it rises to the umbilicus; during the seventh two inches upward; during the eighth and ninth months it gradually enlarges until it reaches the ensiform cartilage. For about a week before delivery the uterus sinks somewhat into the pelvic cavity. (Playfair.)

10. Fetal movements start in at about the middle of the fifth month. These movements may be simulated by irregular contractions of abdominal muscles or flatus within the bowels. (Playfair.)

11. Ballotement will be of service at the end of the fourth month to the end of the sixth month. (Playfair.)

12. Uterine souffle can be heard at the end of the fourth month, and until the term ends. (Playfair.)

13. Fetal heart sound can be made out during the fifth, sixth, seventh, eighth and ninth months. The pulsation is likened to the tic-tac of a watch under a pillow. Steinbach makes the beat 131 for male children and 138 for females, but this is not practical. The beat is most easily heard when the back of the child lies to the abdomen of the mother. An accelerated or irregular beat, preceding or during labor, means danger to the child. There is no relation between the fetal and maternal pulse.

14. The most valuable signs of pregnancy are fetal heart pulsation, fetal movements, ballotement and intermittent contractions of the uterus.

15. Miscellaneous signs of pregnancy are dusky hue of the vagina, dentalgia, facial neuralgia, tendency to syncope, salivation, unusual gratification during some particular act of coitus. (Munde.)

16. The unimpregnated uterus measures two and one-half inches and weighs one ounce, at term it measures six times as many inches and weighs twenty-four times as many ounces. The cervix uteri does not shorten during pregnancy, except during the fortnight preceding delivery, which is due to incipient uterine contraction. The cervix begins to soften by the end of the fourth month; by the end of the sixth month one-half is thus altered; by the eighth, the whole of it. The os is generally patulous. (Playfair.)

17. *Diagnosis of Pregnancy by External Manipulation.* By inspection we may learn the general contour of the abdominal enlargement, whether it be of the usual pear-shape or broader, as is the case with shoulder presentations. Where there are twins side by side, there is usually a depression or sulcus between them, and the uterus is broader transversely. If the twins be placed one in front of the other, no difference can be noted in the breadth of the uterus.

18. By percussion we make out the outlines of the uterus.

19. By palpation we feel the outlines of the uterine tumor, the prominent parts of the child, the round, hard, bony head, the soft

breech, the knees, the feet, the elbows, the round, arched back and the movements of the child.

20. By auscultation we may learn the condition, the presentation, the position and the sex of the fetus and the location of the placenta. (Wilson.)

21. The position of the fetus is generally head downward, and breech toward the fundus uteri. (Playfair.)

22. *Spurious Pregnancy.* Pregnancy is simply by pelvic or abdominal tumors, obesity, ascites, tympanites, distension due to retained menstrual blood, amenorrhœa, etc. A careful physical examination is the only guard against a mistake. (Munde.)

23. *Abnormal Pregnancy.* Extra-uterine gestation—early treatment, the faradic current, late treatment, laparotomy—is very dangerous. Molar pregnancy, be it hydatiform, carneous or spurious calls for complete removal of the mass. Hydramnios may necessitate premature delivery. (Munde.)

24. *Disorders of Pregnancy.* Vomiting of pregnancy, as a rule, needs no treatment, but, if excessive, it is relieved the quickest by the application of cocaine and vaseline (one in fifty) against the os uteri, and by one-sixteenth of a grain of cocaine, internally, frequently repeated. When vomiting of pregnancy becomes so persistent that it resists all treatment and threatens to destroy the pregnant female, abortion or premature labor may become necessary, but should never be undertaken without a consultation. (Munde.)

25. Anemia—the best treatment for this is good food, light, air, exercise, iron and arsenic, and removal of the cause, if possible.

26. Plethora may call for saline laxatives and restriction of albuminoid food.

27. In constipation, direct a regular hour of the day for going to the closet, and give compound licorice powder, or cascara sagrada, or enemata.

28. Diarrhœa should never be neglected, as it may lead to abortion, or premature labor. Give paregoric and tincture of catechu, or acetate of lead, opium and ipecac, and keep the patient quiet.

29. Leucorrhœa calls for vaginal washing with carbolized tepid water.

30. Pruritus, which may be general or local, treat with soda baths if the former, and, if the latter, treat with carbolic acid in glycerine,

nitrate of silver in mild solution, cocaine in rose-water, hydrate of chloral in water, etc.

31. Frequent micturition may often be relieved by an abdominal supporter. So also incontinence of urine. Strychnia, belladonna, or cantharides may be tried in both troubles.

32. In varicose veins, besides applying a flannel bandage or a silk stocking, instruct the woman how to apply a compress and bandage in case of rupture of a vein, as the hemorrhage may be great.

33. Diabetes, albuminuria, jaundice, neuralgia, hemorrhoids, etc., during pregnancy, call for the same treatment as when occurring at other times.

34. Uterine displacements call for replacement, followed by the application of an appropriate pessary and supporter.

35. False pains may come on at any time during pregnancy, and cannot be told from true pains except that the former are relieved by opium.

36. High temperature in the mother is not necessarily incompatible with fetal life.

37. *Immature Delivery.* Abortion is the expulsion of the ovum before the formation of the placenta (twelfth week); miscarriage, its expulsion before the period of viability (twenty-eighth week); premature delivery, its expulsion between the twenty-eighth and thirty-eighth week. (Munde.)

38. Causes of immature delivery are predisposing, dependent on a constitutional affection, and exciting, dependent on mechanical or emotional violence. Symptoms are pain and hemorrhage and dilatation of the os uteri. Dangers to mother from sepsis, fatal hemorrhage, perimetric inflammation, carneous moles. Dangers to child—want of viability.

39. Treatment is prophylactic by fluid extract black haw, and removal or avoidance of cause; preventive by rest, opium and black haw; and, in inevitable cases of abortion, empty the uterus and check the bleeding by rest and ergot, by tampon, and after dilatation of cervix by finger or dull curette. (Munde.)

40. Miscarriage should be treated like abortion, and premature labor like labor at full term.

41. Artificial abortion is best performed, up to the fifth month, by dilatation of the cervix with the steel-branched dilator; it is done because of (1) persistent vomiting, (2) organic visceral lesion, (3)

incarcerated uterus, (4) deformity of pelvis, (5) presence of large tumors. (Munde.)

42. Premature labor is best induced by catheterization of the uterus—not rupture of membranes, for (1) dyspnœa from enormous distension of the abdomen from any cause, (2) hemorrhage from placenta previa, (3) uncontrollable vomiting, (4) organic heart trouble, (5) habitual death of the fetus, (6) pelvic contraction of moderate degree, (7) hopeless condition of the mother, (8) where in previous labors there have been unusually large children. (Munde.)

43. *Fetus.* Fetus at first month is rarely to be detected in abortions. At second month it weighs sixty grains, measures six to eight lines, head and extremities are visible, eyes are two black spots on side of head, umbilical cord is straight, the clavicle and inferior maxillary bone begin to ossify. At third month the embryo weighs from seventy to three hundred grains, measures from two to three inches, fore-arm is formed, fingers can be traced, placenta is formed. At fourth month weight is from four to six ounces, length six inches, sex of the child can be made out. At fifth month weight ten ounces, length ten inches; hair and nails beginning. At six months weight one pound, length eleven to twelve inches; membrana pupillaris; eyebrows. At seven months weight three or four pounds, length thirteen to fifteen inches; eyelids are open; testicles in scrotum; clitoris prominent. At eight months weight four to five pounds, length sixteen to eighteen inches; nails; membrana pupillaris has disappeared. At nine months weight six to eight pounds, length nineteen to twenty inches; males somewhat heavier than females. (Playfair.)

44. *Signs of Death of Fetus.* Before labor the signs of death of the fetus are, [1] loss of fetal heart-beat, [2] loss of fetal motion, [3] sense of dull weight in the uterine region felt by mother, [4] sense of coldness in the womb, [5] putrescent fetor in the discharges, [6] discharge of flatus from the uterus.

45. *The Placenta, Liquor Amnii, etc.* The placenta supplies nutriment to and creates the blood of the fetus. It may be situated anywhere in the uterine cavity. The umbilical cord is the channel of communication between the fetus and placenta. The placenta at full term is a moist mass, containing a great deal of blood; spongy in texture; about seven inches in diameter; usually oval; one surface smooth, facing the cavity in which the fetus lies, the other surface

rough, fastened to the walls of the uterus. The color is reddish, but varies in tint according to the condition of the blood.

46. Liquor amnii is secreted by the amnion and the allantois, it affords a fluid medium in which the fetus floats, and so is protected from shocks and jars, it saves the uterus from injury from the movements of the fetus, and in labor it lubricates the passages. It has nothing to do with the nourishment of the fetus.

47. The uterine and placental murmurs are not usually taken notice of in the diagnosis of pregnancy.

48. Knots in the umbilical cord are brought about by passage of the child through a loop in the cord, generally during labor.

49. In twins, triplets, etc., there may be one placenta or more than one. If two fetuses, these may be joined by two cords to one placenta. This cannot be made out during pregnancy.

50. "So-called material impressions, monstrosities, marks, etc., are the result of arrest of evolution due to pressure by amniotic bands, pressure by the umbilical cord, adhesions of the placenta, or to some pathological condition of the fetus or its membranes, or to heredity.—*American Practitioner and News*.

DERMATOLOGY.

SOME DERMATOLOGICAL NEGATIVES.

Psoriasis is never seen upon the tongue.

Ringworm of the scalp is not found in grown persons.

Lupus (vulgaris) is a specific disease, and is not due to syphilis.

Arsenic does not cure, nor even improve, *all* skin diseases.

Eczema is not pronounced *ec-ze-ma*.

Premature baldness is not always hereditary, but, on the contrary, is frequently due to neglected dandruff.

Lotions are not, as a rule, as good for applications as ointments.

The majority of cases of eczema display no vesicles; and the vesicles, when present, are frequently small and quickly broken.

The animal parasitic diseases cannot always be diagnosticated by observing the presence of the parasite.

Papular syphilis is not "syphilitic psoriasis." Skin diseases

frequently penetrate deeper than the skin, and the study of them is deeper still.

Acne is not cured in a day, nor pemphigus in a week.

The skin presents sixteen square feet of exposed surface, and is unlike other organs, inasmuch as it is more liable to frequent irritation from without.

Non-volatile substances dissolved or suspended in water are not absorbed by the skin to any appreciable extent.

OLEATE OF COPPER FOR RINGWORM.

At one of the asylums for orphan boys, in this city, Dr. Blanc has recently treated twenty-seven cases of ringworm of the scalp—*tinea trichophytina capitis*—with oleate of copper made into an ointment with vaseline, in the following proportions :

℞. Cupri oleat., 3 ss.; vaselin—vel lanolina— $\frac{3}{4}$ j. ℥. Sig. Apply to scalp.

The method pursued is to wash the child's head thoroughly with soft soap and warm water, after having cut the hair as close as possible. When the head is well dried the ointment is rubbed on the scalp, over and beyond the diseased spots, and allowed to remain. The scrubbing of the head is practiced but once a day, but the salve is applied night and morning.

In a few of the milder cases a salve of chrysarobin—chrysophanic acid—half a drachm to the ounce, was applied, but always immediately discontinued as soon as irritation was produced.

The oleate of copper application, from its soothing and antiseptic properties, was found particularly useful in those cases which had gone on to produce kerion, and was found altogether much more serviceable than chrysarobin, which latter was finally completely discarded.

The disease, which averages in duration some six months, particularly in public institutions, was cured in this instance in a somewhat shorter time, as the following statement will show :

Began treatment of twenty-seven boys with oleate of copper May 1st, 1887.

July 13, discharge 4 cases—74 days.

August 24, discharged 4 cases—116 days.

August 28, discharged 6 cases—120 days.

September 3, discharged 7 cases—126 days.

September 22, discharged 3 cases—145 days.

October 13, discharged last three cases—166 days.

Average duration of treatment 4 months and 4 days.

The last six were cases of kerion, in which there was inflammation of the subcutaneous tissue before the copper was applied; and the cure of one of them was retarded by a temporary removal from the institution.

The disease had been communicated by two cats upon the premises which were pets of the boys', and ceased to spread as soon as the cats were removed and the boys isolated. Epilation was not practiced in any of the cases.

MEDICATED SOAPS.

Prof. Shoemaker says that soda soaps are more irritating than potash soaps. Soaps that contain free alkali are, in young children, the cause of many skin eruptions, such as simple erythema, seborrhœa, pustular eczema, and the like.

Alum soap is good in hyperidroses, in pustular eczema and in chafing. Boro-glyceride soap is useful in acne, seborrhœa and rough skin. Chamomile soap is mildly stimulating, excellent for bromidroses, intertrigo, and is the best soap for dandruff. Naphthol soap is the best application for animal parasites on any part of the body, and also in bromidroses. Salicylic acid soap is a non-irritating antiseptic soap, and is good for toilet purposes. Corrosive sublimate soap is serviceable for removing freckles, chloasma, rough skin, for changing a muddy to a clear complexion, and in all kinds of itching.—*Philadelphia Medical Times*.

A SINGULAR CASE OF GLANDERS IN MAN.—According to the *Syn Otetchestva*, December 10, 1887, a man has just died from glanders at one of the St. Petersburg hospitals. The deceased never kept, and nexer came in contact with any horses in his life. Symptoms of glanders made their appearance in him shortly after his face and eyes had been profusely bespattered with foam from a passing cab-horse, the patient being in the act of crossing the street at the time.—*American Practitioner and News*.

REVIEWS AND BOOK NOTICES.

JOURNAL OF THE ELISHA MITCHELL SCIENTIFIC SOCIETY. Vol. IV.
Part II. July—December, 1887. E. M. Uzzell, Raleigh, N. C.

We always receive the Mitchell Society Transactions with peculiar interest, but none more than the present handsome issue. The leading paper is a biography of Prof. W. C. Kerr, by Prof. Joseph H. Holmes, of the University, with a phototype portrait. We congratulate the Society that the biography of Prof. Kerr is contributed by one who has so fully studied his life-work, and who, a geologist himself, was able to get a deeper insight into the difficulties of the practice of this science in our State. Few men knew the hardships of Prof. Kerr's career, and none need be surprised at Prof. Holmes' statement that "every session of the State Legislature was a session of humiliation, and, as he himself expressed it, of "real torture." Every two years he would try the hopeless task of explaining to a new set of legislators the needs of his work, and in the end breathing freely to think they had not abolished the survey. Men, strangers to science, were not easy to convince that geology was of any use unless it led to an examination of all the territory about them for mineral springs, precious metals and minerals, or without actual profits accrued therefrom to some individual within their knowledge. It is too bad that scientific men should need to have their lives vindicated after giving all of the best they possessed in its pursuit, and for the good of the people. More especially is it humiliating in the case of Prof. Kerr, as he was the only native scientist of distinction in the State. We thank Prof. Holmes for the straight-forward and interesting manner of his biography, and only wish it may be read and pondered by our people that they may draw from it the lessons of self-denial which scientific men have to endure for the public good, that future legislators, if they are not willing to show the liberal spirit of educated men, may refrain from killing them off. The list of contributions from Prof. Kerr's pen cover more than three pages—a literary fecundity far from common with us.

We wish we could notice every paper separately, that by Gerald McCarthy on "The Study of Local Floras," full of good hints to

collectors, with a dash of humor that betrays his ancestry; the paper of Dr. F. P. Venable, "On the Limits of the Senses," to enquire "what limits are set on the powers of investigation themselves," and another by the same author on "The Elements Historically Considered"; also the "Effect of Decomposing Organic Matter on Insoluble Phosphate of Lime," by F. B. Dancy, but space forbids. The "Preliminary Catalogue of the Birds of North Carolina, with Notes on some of the Species," by Prof. George F. Atkinson, is a timely and elaborate work, covering nearly fifty pages. Three other papers are by Prof. Atkinson: "Singular Adaptation in Nest-making by an Ant, *Crematogaster Lineolata*," "Remarkable Case of Phosphorescence in an Earth Worm," and "Observations on the Female Form of *Phenogodes Laticollis*." There are other papers of interest, but we advise all of our readers to send 50 cents to Dr. F. P. Venable and secure a copy of this number before the issue is exhausted; it will interest every doctor who has even amateur proclivities for natural science, and they all have. Prof. Kerr's portrait alone is worth twice the price of a number.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By John V. Shoemaker, A.M., M.D. With Colored Plates and other Illustrations. New York: D. Appleton & Co. Pp. 633. 8vo. 1888.

In a very short time three text-books have issued from the American press by American authors, showing remarkable activity in a specialty which was formerly exclusively taught from English and German text-books. The American school of dermatology has won distinction already, and the character of the volumes referred to as recently published by some of the teachers will fully sustain this reputation. This volume will make the seventh one on the subject of skin diseases by an American author, as far as we are aware, and has many points of excellence to commend it, not the least of which is that it is by a teacher who knows the wants of the general practitioner, and who, himself "an active general practitioner," knows the faults of specialist's teaching.

The plan of the book is, first, the consideration of the anatomy, physiology of the skin and general symptomatology, diagnosis, pathology, etiology, treatment and prognosis of its diseases.

The author adopts Hebra's classification of skin-diseases, in order

to avoid confusion, it being the one most commonly accepted. The author has included a description of variola, varicella and vaccinia among the "exudations," and has also added syphilis, including the primary stage.

The strongest part of Dr. Shoemaker's book is the attention paid to treatment. He has introduced several new and useful remedies to the profession, among which are the now well-known oleates. His formulæ, in which are included many of the highly-prized ones, covers over fifty pages, which are arranged alphabetically according to the diseases for which they applicable, and the copious index refers to any particular formula.

The colored illustrations are hardly numerous enough, nor are the diseases illustrated of the sort very difficult of diagnosis, so as to make this part of the work of the greatest value, and we venture to suggest that in future editions that the equivalent of them in some of the practical details of diagnosis and treatment will be appreciated.

We can heartily commend this volume for its practical treatment, and the abundant common-sense suggestions which appear on nearly every page.

A PRACTICAL TREATISE ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY: Including Localized and General Faradization; Localized and Central Galvanization; Franklinization; Electrol-ysis and Galvano Cautery. By George M. Beard, A.M., M.D., A. D. Rockwell, A.M., M.D. Sixth Edition, Revised by A. D. Rockwell, M.D. With nearly 250 Illustrations. William Wood & Co., 56 & 58 La Fayette Place, New York, 1888. Pp. 758.

The present volume is the outcome of a small work which appeared a few years under joint authorship as above. The gifted Dr. Beard died in the midst of a ripening reputation, but his co-author has been diligent in pursuing his subject.

We cannot do better than to give an extract from the preface of the sixth edition to show how much the volume has been enlarged and improved :

"The changes and additions in this work, as successive editions have been issued, have been confined mainly to physics and physiology and the department of nervous diseases, where electricity has wrought its best results. While this agent is far from being a

panacea, yet its increasing range of usefulness in medicine may be best illustrated by reference to these various additions. In the second edition the chapters on Electro-Physics and Physiology were largely rewritten; the method of central galvanization described and illustrated, electro-surgery more fully treated, and the relation of electricity to the diseases of children and of the skin considered in detail. In the third edition were given the highly satisfactory results following the treatment of exophthalmic goitre by galvanization of the sympathetic and of some of the sequelæ of acute diseases by general faradization. The chapter on Electro-Diagnosis also was largely rewritten. A fourth edition was rendered necessary by a revival of the use of Franklinic electricity, due to vastly improved appliances, and contained also the extraordinary results following the application of dynamic electricity to cases of extra-uterine pregnancy.

"The fifth edition discussed facts hitherto, and even now, but little appreciated, concerning the induction oil, its varieties and the differential indications for their use. These statements the author deems worthy of careful consideration, and believes that further experience will result in still more important, as well as more definite, deductions. Within the past two or three years Apostoli, of Paris, has by his experiments and the results that he has succeeded in obtaining, greatly enlarged the domain of electricity in gynecology. The revision in the present edition, therefore, has been mainly restricted to this subject, and the chapter on the Diseases of Women almost entirely recast. The methods through which these better results in gynecology are obtained do but confirm the truth of the observation made in the preface to the third edition, to the effect that the real scientific basis for the use of electricity in medicine surgery is found in electro-physics more than in electro-physiology."

The application of electricity to the wants of the general practitioner is the one in which this volume has succeeded, and, as far as we have examined, the remedial virtues of the different diseases in which the various forms of electricity are applied, are stated with moderation.

Electro-therapeutics is a luxury which has not taken deep root with the profession at large, but its successes in the hands of honest specialists is fast convincing the heretofore credulous, that they must study diligent his branch of the medical and surgical art.

The greatest obstacles are the expense of a proper outfit and a lack of knowledge of electro-mechanics to enable one to repair his battery when it is out of order, but this volume has done all that can be done to make the subject practical.

ON A NEW TREATMENT OF CHRONIC METRITIS, AND ESPECIALLY ENDOMETRITIS WITH INTRA-UTERINE CHEMICAL GALVANO-CAUTERIZATION. By Dr. George Apostoli. Translated by A. Laphorn Smith, B.A., M.D. George S. Davis, Detroit, 1888.

This is a booklet—a bound essay on the treatment of metritis and endometritis, by Dr. Apostoli, now so fast and surely becoming successful in the hands of many physicians in all parts of the world. Electricians are gradually perfecting instruments for gynecological and other purposes, so that this obstacle to treatment is being overcome. Those physicians who have since the Ninth International Medical Congress been looking for a full account of Apostoli's method, will find it here in this little volume. Some illustrations are added, which answer very well to demonstrate the positions.

ATLAS OF VENEREAL AND SKIN DISEASES. By Prince A. Morrow, A.M., M.D. Wm. Wood & Co., 56 & 58 La Fayette Place, New York.

This is a sumptuous atlas 18x14, printed on handsome paper, in a most beautiful typography, with highly-colored illustrations. The author has aimed at illustrating the "common-run" of diseases, and begins in the first two fasciculi with venereal diseases. These are beautifully and naturally rendered, in a most excellent style of lithography giving examples of Chancroids, Phimosis and Paraphimosis; varieties of Chancroids of the Female Genitals; Mixed Chancre, Chancroidal-Bubo, suppurating and gangrenous; Chancroids and Chancre, Lymphitis; Chancroids, Balanitis, Chancres, Digital Chancres; Erratic Chancres of the Eyelids, Lip, Tongue and Cheek; Vaccination Chancres, after the beautiful specimens in Hutchinson's "Illustrations of Clinical Surgery"; Initial Lesion, with Maculo-Papular Syphilide.

The text is elaborate enough, taking up the doctrine of unity and duality, and then describing the nature and source of simple venereal ulcer or chancroid, its contagiousness, ante-inoculability, clinical features and course, varieties, peculiarities depending upon location,

complications, etc. The second fasciculus takes up the outline of the course of syphilis, general characteristics, nature of the virus, sources of the virus, modes of infection, clinical appearances, typical varieties, mixed chancres, etc., etc. The design of the book, as set forth by the prospectus, is fully carried out, and we have here an addition to our very rich dermatological literature, of which every American should be proud.

The illustrations are taken from all the best examples, European and American, and there is nothing to be desired beyond the portraits set before us.

The Atlas will be published in fifteen imperial folio parts at \$2.00 a part, giving to the physician a most excellent work—a library and portrait gallery of skin diseases—for the comparatively small sum of \$30. This, as compared with what some of us have expended for European publications, is cheap, and the comparison makes the American easily the equal, if not the superior, of any.

TAYLOR'S CLINICAL ATLAS OF VENEREAL AND SKIN DISEASES.

We have received advanced sheets, specimen illustrations, of an elegant new work by Dr. Robert W. Taylor, on venereal and skin diseases. The work is to be completed in eight parts, with 58 full-page chromo-lithographic plates, containing 191 figures. The selections of illustrations are from the most eminent masters in this specialty, in addition to original ones. The chromo-lithography is excellent, and the price \$2.50 a part. Published by Lea Brothers & Co., Philadelphia.

THE YEAR-BOOK OF TREATMENT FOR 1887. A Critical Review for Practitioners of Medicine and Surgery. Philadelphia: Lea Brothers & Co., 1888.

This year-book is from the pens of English contributors, reviewing the progress of treatment in medicine and surgery for the past year, and is a compact and well-digested presentation of that year's work. With all the care and discrimination shown, "gleditschine" and "drumine" have taken their places alongside the veritable facts of the past year. It is almost impossible, though, to clear the field of dead and dying therapeutics, and the "Hand-Book" has merits which a casual examination only would accord it.

RECTAL AND ANAL SURGERY, with a Description of the Secret Methods of Itinerants. By Edmund Andrews, M D., LL.D., and E. Wyllis Andrews, A.M., M.D., with original illustrations. Chicago: W. T. Keener, 96 Washington St., 1888.

The title page of this small volume explains its scope and purposes. It is plain, practical and concise, and will doubtless be acceptable to the profession, who, as a general rule, have neglected this branch of practice, and have allowed themselves to be mystified by the pretensions of charlatans. To all such we suggest the possession of this little work.

The history narrated of the introduction of the hypodermic treatment of piles by carbolic acid is very interesting and instructive. Its success was so great at first that it was thought to be specific at last. Long experience showed, though, that, like some other lauded methods, it had its victims. The authors report 13 deaths out of 3,304 cases. They take issue with Dr. Kelsey's rather rosy statement of the great success of the carbolic injection treatment, and give some warning suggestions which all may heed. The whole is written in a spirit of candor and is well fortified with practical experience. Best of all, it is short and inexpensive.

PHOTOGRAPHIC ILLUSTRATIONS OF SKIN DISEASES and Atlas and Text-Book Combined. By George Henry Fox, A.M., M.D. Hand-colored plates. E. B. Treat, 771 Broadway, New York.

This is the second installment of this far-famed work, comprising parts 3 and 4. The price is \$2.00 a part, and the work will be completed in twelve monthly parts. These portraits are true to life, and under the pocket microscope show how admirably photography serves to elucidate the minute details of skin diseases. We can repeat our former approval of this work very heartily.

THE NEW YORK MEDICAL JOURNAL VISITING LIST AND COMPLETE POCKET ACCOUNT

Differs from every one we have seen yet. It consists of an alphabetical index, which precedes the pages ruled off for accounts, three on each page. By this method the complete account of a patient can be kept in very short space, by one entry. It can be commenced any time. Price \$1.25. Address D. Appleton & Co., New York.

ANOTHER TRIUMPH OF LABORATORY RESEARCH— TASTELESS PREPARATIONS OF CASCARA SAGRADA (RHAMNUS PURSHIANA).

(Abstract of an article entitled "An Examination of Cascara Sagrada," by H. F. Meier and J. Leroy Webber, published in the "American Journal of Pharmacy," Feb., 1888.)

Recent investigation of the constituents of Cascara sagrada has led to the discovery of new principles and facts of great importance pharmaceutically and therapeutically.

The chief objection to Cascara sagrada heretofore has been its inherent bitterness. In the light of recent researches, tasteless preparations of this drug highly efficacious medicinally are now to be had.

These discoveries mark a distinct advance in pharmacal attainment and in the therapeutics of chronic constipation, since this remedy can now be much more generally and persistently administered, and its well-known tonic laxative action obtained without the drawbacks which seemed formerly inseparable from its employment.

The facts disclosed concerning this remedy can now be much more generally and persistently administered, and its well-known tonic laxative action obtained without the drawbacks which seemed formerly inseparable from its employment.

The facts disclosed concerning this remedy deserve more than a passing notice, especially since they indicate the existence of principles and modes of action extending far beyond the subject indicated, and are well worth the close attention of the thoughtful and scientific physician. A valuable contribution to the knowledge of the chemical constitution of this drug appeared in the *American Journal of Pharmacy* for February, 1888, which makes it possible not only to obtain a true interpretation of the various clinical observations, but clears up apparent anomalies, and also indicates the reasons for observed effects, which have lately been disputed, but now admit of no further question or misunderstanding.

Among the discoveries referred to in this valuable paper, of especial interest to the physician, is the influence of a class of vegetable ferments and their recognition as the causes of various abnormal conditions, such as colic, vomiting, nausea, diarrhœa and

dysentery which occasionally attend the administration of certain drugs.

It appears that *Frangula* bark, when fresh, contains such a ferment in excessive quantities, and is, therefore, unfit for use until the ferment has exhausted itself—the process usually occupying several years. It also appears that *Cascara* contains some of this principle, and this fact will account for the occasional untoward effects of the drug, which have been observed as consequent on the employment of a number of its preparations heretofore in the market. These effects are, therefore, not due, as has been supposed, to any idiosyncrasy on the part of the patient, or to the laxative or tonic constituents of the bark itself, but to a distinct objectionable principle, which once recognized can be rendered inoperative and harmless.

It has been reserved for Parke, Davis & Co., through their exhaustive investigations, to be the first to clearly recognize the principles involved, and by the application of such intelligent comprehension, to formulate and adopt correct pharmaceutical processes, and thus overcome all the difficulties heretofore existing. As a result of their investigations, they now offer to the medical profession a fluid extract, a solid extract, and also a concentration, all of which (designated as "Formula of 1887") exhibit only the desirable laxative and tonic properties, and being free from this ferment, are incapable of producing griping, nausea or any of the mal effects above enumerated.

It appears that these ferments are distributed through a large number of vegetable substances, being not confined to unripe fruits only, but can also exist in the root, bark, leaf, or even in vegetable extracts of which we have illustrations in various juices, liquid or inspissated. Of this latter class aloes will serve for an example. A familiar illustration of an unaltered vegetable would be the cucumber, the green apple (familiar to the school-boy), and unripe fruit generally. In the case of the cucumber, experience has taught the means of removing this ferment by dialysis or osmosis. We sprinkle salt over it or surround it with a strong brine which provokes an outward flow of the fluid containing the ferment, with the result that the ferment is to a large extent removed, and thus rendered incapable of producing the same conditions in the stomach, for which it was intended in the plant; that is, the creation of vege-

table acids from other material previously existing, in the same manner that pepsin, likewise an unorganized and soluble ferment, provokes the solution of fibrin and albumen, forming peptone, or as diastase is capable of effecting the transformation of starch into soluble glucose and dextrin, both new bodies.

That these ferments all bear a direct quantitative proportion to the results accomplished, has been practically recognized. We are promised a satisfactory indication of the sources of the acids formed in the plant, which will enable us to corroborate the statements that identical processes go on in the stomach when the ferment is permitted to exert its action there.

The physiological tests now being conducted at the laboratory of Parke, Davis & Co., with the different principles contained in the plant, cannot fail to demonstrate finally not only the superiority of Cascara itself to its former supposed competitor Frangula, but also its comparative value as a laxative.

To physicians desiring fuller information concerning the discoveries made, a reprint of the article from the "American Journal of Pharmacy" and a working bulletin descriptive of this drug will be mailed by Parke, Davis & Co., free on request.

BARTLEY'S POCKET URINARY TEST CASE.—We take pleasure in recommending this compact and reliable test-case as being the very thing to make examinations of urine at the bed-side. We have used one for a long time, and would be at a great loss to do without it. The whole is comprised in a neat metal case 4 in.x2in.x1 in., and can be safely carried in the pocket. The price is \$2.00. Address H. Campbell & Co., 140 Nassau St. New York.

A NEW LOCAL ANESTHETIC.—The *Medical News* has an account of Erythrophlæinum or Haya, which comes to us from the *Deutsch Med. Wochenschrift*, but as we have hardly recovered from Gleditschine and Drumine, we will wait and see about this new candidate for favor. We learn, though, from the *Pharmaceutical Era*, that it is the alkaloid of sassey, or casca bark, which has been investigated by Dr. Lewin, and he has found anesthetic properties.

NOTES.

WE learn from the *Record* that quinine is now quoted at from 40 to 45 cents an ounce.

ANTIPYRIN in whooping-cough, in doses from $1\frac{1}{2}$ to 3 grains, three times a day, for children from 1 to 3 years, is reported favorably.

PROGRAMME FOR THE FAYETTEVILLE MEETING.—Dr. Julian M. Baker, Secretary of the Medical Society of North Carolina, desires to learn the titles of papers to be read at the approaching meeting, that he may make arrangements with the local committee for assigning them to their proper places in the printed programme. It needs no word from us to show the necessity of attending to this in time, and contributions of regular or voluntary papers are requested to write at their earliest convenience to Dr. Baker at Tarborough, and also to the JOURNAL.

ANTISEPTIC RULES FOR MONTHLY NURSES.—In a paper introducing a discussion on the prevention of puerperal fever, at the Section in Obstetric Medicine of the British Medical Association, Dr. W. S. Playfair laid down the following “antiseptic rules for monthly nurses”: 1. Two bottles are supplied to each patient; one contains a solution of chloride of mercury of the strength of one part to 1,000 of water, tinted with litmus (called the 1-in-1,000 solution), the other carbolized oil (1 in 8). 2. A small basin containing the 1-in-1,000 solution must always stand by the bedside of the patient, and the nurse must thoroughly rinse her hands in it every time she touches the patient in the neighborhood of the genital organs, for washing or any other purpose whatsoever, before or during labor, or for a week after delivery. 3. All sponges, vaginal and rectal pipes, catheters, etc., must be dipped in the 1-in-1,000 solution before being used. The surfaces of slippers, bed-pans, etc., should also be sponged with it. 4. Vaginal pipes, enema tubes, catheters, etc., should be smeared with the carbolized oil before use. 5. Unless express directions are given to the contrary, the vagina should be syringed twice daily after delivery with warm water, with a sufficient quantity of Condy’s fluid dropped into it to give it a pale pink color. 6. All soiled linen, diapers, etc., should be immediately removed from the bedroom.—*N. Y. Medical Journal*.

CEREBRO-SPINAL MENINGITIS has visited during this year five or six counties in this State, but not seriously except in Asheville. The *Medical News* reports its presence in Philadelphia.

PROF. VIRCHOW recently exhibited (*Medical Record*) a larynx removed *post-mortem* showing a tuberculous ulcer that had healed, thus proving that laryngeal phthisis may undergo spontaneous cure.

CHLORATE OF POTASSIUM and iodide of iron are incompatible, as is well known. A recent death from its administration prompts the *Pharmaceutical Era* to remind us that all the iodine is set free in mixtures containing these chemicals.

A Synopsis of the Physiological Action of Medicines, Prepared for the Use of Students of the Medical Department of the University of Pennsylvania, by Louis Starr, M.D., James B. Walker and W. M. Powell, M.D., Philadelphia; P. Blakiston & Co. Price 75 cents. We presume that students for whom it is prepared would find this a useful synopsis.

INDEX MEDICUS.—This most remarkable publication has lived nine years on starvation rations. Printer's ink in abundance has been lavished upon it, editors and publishers have used unusual efforts to promote its interest, and Mr. Leyboldt lost money in sustaining it, as Mr. George S. Davis is doing now. The Medical Society of North Carolina subscribed liberally one year to sustain it, but we see by the published list that not a copy is taken in North Carolina this year, but in order to amend this record the JOURNAL reënters its name upon the list, hoping that the example may be followed by others who are as deeply interested in medical literature as we are. Of all our working outfit, nothing is of more value in our office than the seven volumes of "Index Medicus" and eight volumes of "Index Catalogue of the Library of the Surgeon General's Office," and the gap which has unavoidably taken place we hope to have filled as early as possible. The subscription to "Index Medicus" amounts to the small number of 363 for the whole world; this is a singular commentary on the scientific activity which is known to exist. How a doctor who is a student can afford to ignore a classified index of all medical literature in every language when it can be had for \$10 a year, is hard to comprehend.

LANOLIN is said to remove wrinkles when rubbed systematically upon the skin.—*Medical Record*.

GARDEN AND FOREST is the name of a weekly journal conducted by Prof. C. S. Sargent, Director of the Arnold Arboretum, Cambridge, Mass. The first number is a foretaste of good things yet to come, and our readers would do well to send for a specimen number. Address Garden & Forest, Tribune Building, New York.

BAILLY has found that tampons saturated with chloride of methyl are a convenient and efficient means of producing local anæsthesia by refrigeration. He has devised a simple apparatus by which chloride of methyl may be kept in a liquid condition for several hours, transported conveniently, and applied by tampons or a brush. With suitable precaution, this method of anæsthesia may be applied to mucous membranes.—*Gazette Médicale de Paris*.

MERCURIAL FUMIGATIONS IN DIPHTHERIA.—Dr. J. Corbin, Brooklyn, N. Y. (*N. Y. Medical Journal*, March 10, 1888), reports his experience in the use of calomel volatilized by means of a strong lamp, 1 drachm at a time, under a canopy, as a treatment for diphtheria. So the enormous catalogue of remedies lengthens, and still we trust that the hope Dr. Corbin bids us have may not be blasted by a longer experience in this new application of mercury.

AMPUTATIONS IN NORTH CAROLINA.—As some of our readers are Scotchmen, and need to have a good joke analyzed for them, let us proceed to say that the paragraph copied into the JOURNAL (and, by the way, came near going in the second time on its return visit from way "out West") from the *Elizabeth City Economist*, is one of the standard jokes of the Sound region of North Carolina. It crops out now and again, generally upon the meeting of some Convention in that hospitable country. The date set by the facetious editor of the *Economist* might have been more cautiously selected, and instead of putting it at 1814 to 1820, dated it back to a safer time for the story. To our Scotch readers, particularly, we would like to state that, during the Revolutionary War, which was waged between 1775–1783, in North Carolina there were many amputations done, we presume, from the number of Scotchmen shot at the Battle of Moore's Creek Bridge and elsewhere, and that after

that family quarrel was settled we got some Scotch doctors over from the University of Edinburgh who settled at Wilmington and elsewhere in North Carolina, doubtless showed the teachings of the Monro's by cutting every leg in their reach. So much in the way way of explaining the joke. But here is a piece of *history* which our contemporaries can copy: John Lawson, who was "GENT. SURVEYOR GENERAL OF NORTH CAROLINA" in 1700, records in a book of his travels, which is dignified with the title of "The History of North Carolina," says: "When they [the Indians] take a slave and intend to keep him to work in their fields, they flea [flay] the skin from the setting on of his toes to the middle of his foot, so cut off one-half of his feet, wrapping the skin over the wounds and healing them." [Pp. 322-323.] Dr. John Brickell, an Irish doctor, who had the education to write a better book (and, by the way, he was a settler in the district of this State famed for "one-legged niggers" and "pretty girls") plagiarized all that Lawson said. [Brickell's Natural History of North Carolina, 1737.] Any one curious to know these items can consult the above venerable authors at the office of the JOURNAL. We claim, therefore, that Chopart or Pirogoff or Syme must bow their compliments to the medicine men of the Tuscaroras, and even Esmarch himself, for Dr. John Brickell, the same veracious chronicler, says that "flux of blood seldom or never follows any of their operations."

ARSENICAL PREPARATIONS IN ECZEMA.—Dr. T. McCall Anderson says in his valuable work on "Diseases of the Skin" as follows about the use of arsenic: "Of *arsenical preparations*, the one which is most used is Fowler's solution (*liquor arsenicalis*), although any of the others may be selected according to the taste of the practitioner. It is better, however, for the physician to limit himself as much as possible to one preparation of arsenic, for he thus becomes more familiar with its exact mode of operation and with the probable doses for different constitutions. He must also satisfy himself, before prescribing it, that there is no derangement of the digestive organs, else the remedy is pretty certain to disagree; and, further, if it aggravates in a marked degree the cutaneous irritation (the itching, heat, etc.), which it is pretty sure to do in the acute form, it is a proof that the disease is not in that stage in which benefit is likely to be derived from it. It is now well known,

as first pointed out by Hutchinson, that persons taking arsenic are very liable to be affected with Zona (Herpes Zoster), and if it occurs, it is advisable to omit the use of the remedy until the rash has completely disappeared. An adult may take from 3 to 5 minims thrice daily, and if, after the continuance of those dose for several weeks, no improvement takes place, and it appears to suit the patient in every respect, it may be gradually increased till the disease begins to yield, or until it begins to disagree. It is not necessary to stop it if slight irritation of the eyes or puffiness of the face is induced; but, if these symptoms are at all aggravated, and especially if they are accompanied by anorexia, pains in the stomach and head, nausea, bronchitic irritation, or a feeling of great lassitude and prostration, the dose should be diminished, or in some cases omitted, for a few days. On no account, however, should its administration be stopped *altogether* because these symptoms are produced; and I indorse in a measure the statement of the late Dr. James Begbie that, 'in order to secure its virtues as an alterative, . . . it will be necessary to push the medicine to the full development of the phenomena which first indicate its peculiar action on the system. Arsenic as a remedy is too often suspended or altogether abandoned at the very moment when its curative powers are coming into play. The earliest manifestation of its physiological action is looked upon as its poisonous operation; the patient declares that the medicine has disagreed with him; forthwith the physician shares his fears; the prescription is changed, and another case is added to the many in which arsenic is said to have failed after a fair trial of its efficiency.' It is necessary to observe that the appropriate dose of Fowler's solution varies for different individuals, and that, while 3 minims thrice daily soon disagree with some, 10, 15, or even 20 may occasionally be taken by others with impunity and benefit. I have repeatedly had occasion to observe—what has not, as far as I am aware, been previously noted—the great liability of patients to catch cold while taking arsenic; and I have so frequently seen bronchitis developed during an arsenical course, as to leave no doubt in my mind as to the cause of it. It is therefore even more necessary to warn patients who are taking arsenical, than those who are being subjected to a mercurial course of their liability to catch cold."

DR. H. T. BAHNSON OF NORTH CAROLINA.—The Honorary Diploma of the Louisville Medical College was conferred this winter upon Dr. H. T. Bahnson, of North Carolina. As is well known, this honor is awarded for merit alone and without solicitation from either the recipient or his friends. Some of the most eminent men in the country have received the same distinction, and we believe that the newly adopted son of the Louisville Medical College is in every respect qualified to be a worthy brother of those who have gone before him. Henry T. Bahnson, M.D., was born March 4, 1845. His collegiate education in Pennsylvania was interrupted by the war in 1861, when he returned to the South and prosecuted his classical studies under a tutor until the latter part of 1862. He then entered the Confederate Army and served as a private until the surrender of General Lee at Appomattox C. H. Upon his return home he commenced the study of medicine, and in the fall of 1865 entered the Medical Department of the University of Pennsylvania, graduating in 1867. He then attended four semesters at the University of Berlin, one at Prague and one at Utrecht. Since 1869 he has practiced medicine at his home, Salem, N. C. He has served a term of six years on the Board of Medical Examiners of his State, is a member and ex-President of the Medical Society of North Carolina, and a member of the State Board of Health.—*Medical Herald*.

THE DOMESTIC USE OF SACCHARINE.—A correspondent writing in the *Scientific American* relates his experience in using saccharine as follows: Sugar being a prohibited article to me, I naturally became interested in Fahlberg's "saccharine," and obtaining a supply as soon as possible, began experimenting with it. Using it alone to sweeten lemon juice or stewed cranberries, I found it very difficult to mix, and tried various dodges to remedy it, all of which failed until I thought of dissolving it in glycerine. I found that for general purposes the formula of glycerine one pound, saccharine one drachm, heated to solution, was the best. Two teaspoonfuls of above to the juice of one lemon made up to eight fluidounces make a lemonade sweet enough for almost any one, and three teaspoonfuls to four ounces of stewed cranberries make a dish "fit for a king." I gave a sample of the above to a gentleman to whom sugar was tabooed, and who was using saccharine alone, and asked him to try it with cranberries and report. When next seen he said, "That's splendid. I've bought a barrel of cranberries and would not go back to sugar if I could." The advantages of the mixture over pure saccharine are: That the glycerine gives it a body, and the mixture very closely resembles in taste and appearance the best white honey; that it dissolves readily in water, milk, tea and coffee, wines and liquors; and that it can be readily measured.—*Medical News*.

THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

The Thirty-fifth meeting of the Society will take place in the hospitable old town of Fayetteville, beginning on the 8th day of May. Besides the usual interest attaching to such a meeting, the cordial fellowship of medical brethren, the exchange of professional knowledge, the news of the vicissitudes of old friends in the career of their lives—we may be assured of the hearty welcome of the citizens of Fayetteville, who are of the truest type of Carolinians, a type which we are willing to accept as the very best our State affords. The hotels are the best in the State, the railroads centre there from all quarters now, and there is every indication of a full meeting.

THE NORTH CAROLINA BOARD OF HEALTH

will also hold its annual session probably on the second day of the meeting, the 9th May. It is earnestly desired that a due amount of importance will attach to this meeting. The Board is the child of our Society, and needs her fostering care and cordial support.

THE BOARD OF MEDICAL EXAMINERS

will be in session from Monday, the 7th of May, until all candidates are examined. The unusual interest attaching to the Board this year is the contribution by Messrs. D. Appleton & Co., of New York, of \$25 worth of medical books from their catalogue to the candidate passing the best examination.

NORTH CAROLINA BOARD OF HEALTH.

Dr. J. W. Jones, President, Tarborough.

“ Thomas F. Wood, Secretary, Wilmington.

“ John McDonald, Washington.

“ Richard H. Lewis, Raleigh.

“ W. D. Hilliard, Asheville.

“ Prof. W. G. Simmons, Wake Forest.

“ J. H. Tucker, Henderson.

“ Arthur Winslow, Raleigh.

“ H. T. Bahnson, Salem.

A SPLENIC DISCORD.

BY H. H. BICKFORD.

A ductless gland is the spleen,
 In left hypochondrium seen,
 Oblong, and small in size,
 Dark-bluish-red to the eyes ;
 But what is its function—I ween ;

Parenchymatous body they claim ;
 Pathologists talk in this strain :
 'Tis full of trabeculæ,
 Reposits the blood, "ye see,"
 This anthropological drain.

"Hepar sinistrum"—old Galen cries,
 "Diverticulum sanguinis"—our Gray replies :
 It's a check on phlogosis,
 And controls hematosis,
 (By the law of Osmosis)
 Which nature denies.

Quæ manu potissimum curat—Amen !
 Was suggested by "Celsus," adopted by "Senn ;"
 "Davaine" found microbes enjoying the spleen.
 By "Laveran" the malarial bacillus is seen ;
 If we treat by "resection" the organ—what then ?

But "Malaria," like some venomous snake,
 Vents her spleen on this function by "shiver and shake."
 Malpighian cells, in my humble opinion,
 Can't absorb the miasma that's in her dominion ;
 Unless—"Rex Quininus" takes "Old Ague Cake."

And so, by exclusion we'll end all confusion,
 This gland surely aids the digestion.
 If a duct could be seen, in "some good little spleen,"
 How soon this would settle the question !
 Tinnitus poeticus, et præterea nihil.

—*St. Louis Courier.*

ACETANILIDE (ANTIFEBRIN) IN FEBRILE DISEASES.—Dr. Ademski (*Wratsch*, 1887, No. 25; quoted by *Bull. Gén. de Therap.*, January 15, 1888) narrates his experience with acetanilide in various febrile diseases. Amongst them were 4 of typhoid, 3 of acute rheumatism, 2 of pleuro-pneumonia, and 1 each of intermittent pleurisy, phthisis and erysipelas. Not all patients bore the remedy well, and in one case of acute rheumatism a dose of sixty centigrammes (ten grains) brought on symptoms of collapse. The temperature was invariably lowered. A dose of two grains every hour rapidly lowered the fever heat. Sweating was a constant result. In large doses acetanilide induces hypnotic effects, and in such cases as acute rheumatism and erysipelas, manifests an anodyne action. Diuresis was a symptom in the majority of cases. The urea was lessened, but the total output of nitrates was increased; the phosphates, the chlorides and the sulphates were diminished in quantity. The diuresis for the most part consisted, therefore, in a mere increase of the urinary water.

OBITUARY.

D. J. C. CAIN, M.D.

Dr. Cain, whose sudden death was mentioned in the columns of this paper yesterday, was born in St. John's, Berkeley, S. C., in 1817. He graduated from the South Carolina College, Columbia, in the class of '35, and received his diploma from the Medical College of the State of South Carolina in 1838. Four years were spent subsequently in Paris perfecting himself in his profession.

Dr. Cain acquired an extensive practice in this city, being greatly beloved by a large circle of acquaintances. He edited and published for several years the *Charleston Medical Journal and Review*, being associated in this important work with Dr. F. Peyre Porcher, of this city. He was also for several years physician to the Marine Hospital and to the Roper Hospital, and was one of the lecturers in the "Charleston Preparatory Medical School," with Drs. Flagg, Porcher, Miles, Chisolm, Lockwood and others.

After the war Dr. Cain resumed the practice of his profession here, but subsequently, on account of his health, he moved to Asheville, where he was eminently successful. So great was the confidence placed in his professional skill that a few years since he enjoyed the singular distinction of being called across the water to visit a gentleman in Switzerland who had been a former patient of his in Asheville—his personal expenses and those of a son being defrayed, in addition to the honorarium. He has recently been the recipient of a well deserved and most complimentary notice in the editorial columns of the *North Carolina Medical Journal*, and he was made an honorary member of the State Medical Association at its recent session in Aiken.

Besides his professional attainments, which were of the highest and most cultivated order, he was a man of very pleasing manners, kind, gentle and modest.—F. P. P. in *Charleston News and Courier*.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLETTH THOMAS, M. D., } Editors.

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SELECTED PAPERS.

CASE OF CEREBRAL ABSCESS IN CONNECTION WITH
OTTIS MEDIA, SUCCESSFULLY DIAGNOSED AND
EVACUATED.

By DAVID FERRIER, M.D., F.R.S., Physician to the National
Hospital for the Paralysed and Epileptic. Read before the
Medical Society of London, March 5th, 1888.

The case which I have the honor to bring before you this evening is one of the few cases of cerebral abscess in connection with disease of the middle ear which have been accurately diagnosed during life, and successfully treated by operation. For though abscess of the brain is a very common occurrence in connection with inflammation of the ear, and perhaps more frequently in chronic affections of this kind, it is generally the subject of post-mortem record, rarely accurately localized during life, and still more rarely treated successfully.

I have only been able to find two cases of a similar nature. One of these has been recorded by Gowers and Barker (*Journal*, Decem-

ber 11th, 1886). This was a case of abscess in the right temporo-sphenoidal lobe, diagnosed without external indication, beyond the fact of inflammation of the ear, and successfully evacuated. The second has been recorded by Greenfield (*Journal*, February 12th, 1887). This was a case of abscess situated in the anterior part of the left temporo-sphenoidal lobe, in which, in addition to the general indications of abscess, there were symptoms of pressure on the third nerve, a fact which prohibited the localization of the seat of the abscess.

Two others have been referred to by Greenfield, namely, a case reported by Schondorff (*Monatsschrift für Ohrenheilkunde*, 1885, No. 2); and a second by Truckenbrod (translated in *Archives of Otology*, June to September, 1886). In both these, cases, however, there were, in addition to the general symptoms, external indications of the seat of the abscess in the form of localized pain and œdema of the skull, and a fistula leading from the primary seat of disease.

The fistula in Truckenbrod's case led only under the pericranium to a rough place on the outside of the bone, while in Schondorff's case it led directly into the brain, and indicated the way by which the pus had penetrated. These two cases, therefore, are to be placed in a different category from those of Gowers and Barker and Greenfield; but a successful result was obtained in all.

Of the successful result in the case I bring before you this evening you will all be able to convince yourselves, as the quondam patient is here, and apparently as well as he has ever been.

On the evening of December 8th, 1887, I was asked by Mr. T. W. Coffin to see with him a case under his care, the history of which he related to me, and subsequently gave me the following detailed notes :

T. H., aged 47, a skilled artisan, was first seen by Mr. Coffin on November 25th. He had been ill since November 10th. On the 15th a discharge, somewhat offensive, had come from the left ear, which continued for about eight or ten days. When first seen he was in a drowsy condition, but was capable of being roused, and replying to questions put to him. He complained of pain over the left side of the head, forehead and back of the eyes, with a considerable degree of photophobia. The pain on the left side of the head was interrupted by pressure and percussion. There was slight

discharge from the left ear, but the ear could not be thoroughly examined on account of the tenderness. The pupils acted normally, and vision appeared unaffected. There was no motor or sensory paralysis. The pulse was 52, weak and intermittent; respirations 14, labored and sighing. The temperature was normal.

Mr. Coffin ordered the ear to be syringed with weak Condyl's fluid, and prescribed a stimulant.

Next day the patient was brighter. He had less pain in the head. He was able to sit up in bed and smoke a cigarette, but he continued very drowsy and slept much.

On the 27th, 28th and 29th he was still improving. The temperature was normal, the pulse regular and the tongue cleaner under the influence of a saline mixture and small doses of mercury. The discharge from the ear was more copious than it had been. There was very little tenderness on percussion of the left side of the head. The patient was generally asleep, but would rouse up for an hour or so, and occasionally smoke a cigarette.

On the 30th he was more drowsy, and apparently unwilling to be disturbed. At times it was very difficult to rouse him at all. He complained of more pain at the back of the eyes and general headache. His pulse was 60, respirations 16 and temperature absolutely normal.

On December 1st and 2d the condition was essentially the same. There was no increase in the headache, but the drowsiness was greater.

Early on the 3d he had become temporarily delirious, and had fallen back exhausted, but during the rest of this day and next there was no noteworthy change in the symptoms.

On the 5th Mr. Coffin thought there was slight weakness in the right angle of the mouth, but so slight that it was considered somewhat doubtful by those who were acquainted with the usual expression of face.

On the sixth for the first time there were indications of affection of speech. He used wrong words, and seemed angry at not being understood when he asked for what he wanted.

It was on the evening of the 8th that I saw the patient. He was at that time less drowsy and much clearer in his intellect than he had been for some time previously. He was able to sit up in bed and talk, but his words were incoherent and for the most part unin-

telligible. He appeared to understand simple questions, but at other times appeared confused and unable to understand. He called three things by wrong names. When asked to read a few sentences from a journal placed before him, the words he uttered had little or no resemblance to those before him.

There was no appreciable defect in the mobility or sensibility of his limbs, but the right angle of the mouth acted less energetically than the left. Examination of the eyes, carried out with some difficulty, revealed signs of optic neuritis, but a more thorough investigation of this and other conditions was reserved till the following day. From the facts, however, related to me by Mr. Coffin, and the patient's condition as seen by myself, I confirmed the opinion passed by Mr. Coffin that it was a case of abscess of the brain, in connection with disease of the middle ear, and I considered that the position of the abscess was fairly indicated by the symptoms.

The case seemed to me to be one which ought to be dealt with speedily, and I advised immediate removal to the hospital, with a view to further careful investigation and operative measures. The patient was removed the next morning to the National Hospital for the Paralysed and Epileptic, under my care. At this time he was conscious, and complained of no pain anywhere. He replied to questions, but frequently used wrong words without seeming to be aware of the fact. He occasionally hesitated to do what he was told, appearing as if he had some difficulty in understanding what was said to him. There was perceptible weakness of the right angle of the mouth, and though he could make every movement with his right hand, it was found that the grasp of the right hand was only 80 pounds, whereas that of the left was 100 pounds, the patient being a right-handed man. The tendon reactions were active on both sides and there was no appreciable difference between those of the left and right. There was no affection of sensation. Ocular movements were normal, and the pupils equal and contractile. Ophthalmological examination (verified by Mr. Brudenell Carter) showed the existence of well-marked optic neuritis, with a small hæmorrhage over the right disc, and a whitish band below that of the left. The senses of taste and smell were normal. The patient could hear a watch 15 inches from the right ear, but only on contact on the left side. The left auditory meatus was filled with a purulent secretion, which prevented a view being obtained of the

condition of the membrana tympani, and it was considered not advisable to attempt to remove this at the time.

Though the patient complained of no pain in his head, I found on careful examination that there was a spot tender to pressure and percussion situated two inches above and just anterior to a line drawn upwards from the external auditory meatus.

From the results of my examination on this and the previous day, I had no doubt that the patient was suffering from a cerebral abscess. The comparatively rapid onset of symptoms indicative of cerebral mischief in a man previously in good health, coincidently with signs of inflammation and purulent discharge from the left ear, were in favor of abscess rather than tumor. There had been no vomiting, convulsions, or febrile disturbance or other indications of meningeal inflammation.

The fact that there had been no rise of temperature did not exclude the idea of encephalitis resulting in abscess, for many cases of cerebral abscess appear to run their course without causing febrile disturbance, the temperature being in some rather subnormal than the reverse. The position of the abscess, verified by the operation, was determined both from the symptomatology and the position of the pain experienced on percussion. The relative weakness of the right angle of the mouth, the ataxic speech and slight degree of word-deafness, indicated that the disease was situated in close proximity to the speech and auditory centres of the left hemisphere, but not actually destroying them; and the conditions of such a lesion would be supplied by an abscess situated in the anterior third of the temporo-sphenoidal lobe and abutting or pressing on the fissure of Sylvius.

This localization from symptomatology I considered confirmed by the discovery of a spot, tender on pressure and percussion, coinciding in position with that part of the superior, or superior and middle, temporal convolution which lies immediately posterior to the ascending limb to the fissure of Sylvius, and below the inferior extremity of the ascending frontal convolution. I would not consider the position of the tender spot as by itself a safe guide to the localization of abscess or other cerebral disease, for the pain may be referred to a region at a considerable distance from the disease. Thus Mr. Hulke (*British Medical Journal*, July 3, 1886) records a case in which there was a tender spot above the ear, whereas the

abscess was in the cerebellum; and in a second pain was felt acutely in the occiput, whilst the abscess was in the temporo-sphenoidal lobe.

But when, as I pointed out many years ago, there is pain on percussion not spontaneously complained of over a region indicated by the symptoms as probably the seat of disease, the localization is rendered all the more certain. I was therefore confident that an abscess would be found in the position indicated, and was of opinion that no time should be lost in resorting to trephining with a view to its evacuation.

My colleague, Professor Victor Horsley, after consultation on the case, concurred in my views, and operated accordingly on the following day. I need only remark that when the dura mater was removed over the region indicated, the brain, which had a normal appearance on the surface, was seen to bulge forward into the opening in the skull a sure indication of pressure underneath; and on puncturing with a trocar a considerable quantity of inodorous pus—about 5 drachms—welled out through the cannula. The subsequent history is one of uninterrupted recovery. The optic neuritis gradually subsided. Already, on the fourth day after the operation the optic discs were clearing, the margins were becoming defined, and the extravasation of the edge of the right disc had disappeared.

On December 23d the left disc was apparently quite normal; the right was still a little veiled, but the effused blood was no longer visible.

On January 3d no difference could be perceived in the action of the two sides of the face. At this time the wound had become quite cicatrised. The removal of the surgical dressings allowed of a more careful examination of the condition of the left ear than had been previously considered advisable. After examination of the ears on January 18th Mr. Cumberbatch reported that the discharge from the left ear had entirely ceased, and there was no abnormal condition of the external auditory meatus. Hearing, right 30-100, left 20-100.

Process conduction was normal, indicating mischief confined to the middle ear. No perforation could be detected in the membrana tympani, but it was thickened, cuticular in appearance, and purely granular. There was a slight opacity—probably cicatricial—behind the handle of the malleus, and rather above the centre of the membrane.

Before leaving the hospital the patient gave me the following personal details of his case. He first complained of pain in the left ear on Tuesday, November 8th. For this he inserted some cotton wadding in the ear. Next day this appeared tinged with blood. For about five days a clear discharge occurred, soaking through the wadding and staining the pillow on which he lay. At this time, also, he had some pain in his throat and chest, which, together with the condition of his ear, he attributed to chill. The discharge from the ear changed to a thick, gummy, slightly yellow flow. He then took to his bed, as he did not feel able to stand up.

From November 20th his memory became an entire blank. "The next thing I recollect," said he, "was your standing by my bedside."—*British Medical Journal*.

THE TREATMENT OF TYPHOID FEVER IN THE HOSPITALS OF NEW YORK, BOSTON AND MONTREAL.

New York Hospital.—During the early part of this summer the routine treatment of typhoid fever in Dr. Peabody's wards, if the patient entered during the first ten days of disease, was a calomel purge immediately followed by naphthaline in doses of ten grains every three hours. The first seven cases died (two having entered the hospital moribund), one of septic infection, one of acute mania, and the three others simply from the intensity of the poisoning, the lesion being very extensive.

Since August 14th we have had but one death in twenty-one cases—two of these are still sick, but doing well—of this number, thirteen have had absolutely no treatment directed to the intestines, eight have had naphthaline, and among these the one death occurred.

When the temperature rises high enough to make the daily average about 103° , antifebrin is given, either in large doses at long intervals, or in continuous doses of two grains every two hours during the day, and three grains every three hours during the night. Some patients have had two grains every hour during the day. In no case was any bad result noticed: on the contrary, the patients

were quieter, slept better, and temperature, pulse and general condition were much improved.

Whiskey is given when pulse, tongue and condition indicate the need of stimulation, the amount varying from three to eight ounces during the twenty-four hours. Fluid extract of digitalis is added occasionally in small doses.

When there is insomnia, it is almost always relieved by morphine, generally given hypodermatically, as so many of the patients have a greater or less tendency to vomiting. In a few cases the bromides, or urethan have been tried, but not with such good results as morphine. In cases of delirium, with great restlessness, hyoscin hydrobromate, given hypodermatically in doses of one-hundredth of a grain, has been tried with very good effect. It has been followed by several hours of quiet sleep.

Diet is of milk, patients taking generally from four to five pints daily. If the stomach is at all irritable, milk with lime-water, or peptonized milk is given. Some patients take beef tea well, and have from one to two points of this daily in addition to the milk.

In a few cases nourishment by the rectum has been tried for short times, with the effect of relieving an irritable stomach. Laxative enemata are given every other day if patients have no movements from the bowels; and in almost all of our cases this has been necessary, as patients have been generally constipated, diarrhœa being the exception rather than the rule, during the summer just passed.

Counting three cases not already entered in this report, as they were not here during Dr. Peabody's service, there have been thirty-one cases treated here since last April with eight deaths, a mortality per cent. of almost 26. This very high rate is to be explained partly by the fact that several patients entered late in the disease, and in very bad condition.

St. Luke's Hospital.—In Dr. Francis Kinnicutt's wards the treatment is essentially general and symptomatic. During the past several years, when it has been possible to establish the date of the beginning of the disease, occasionally one or more moderately large doses of calomel have been given in the first days of the fever, but never with the result of aborting the disease. So many factors are involved, that it is difficult to give a trustworthy opinion in regard to the alleged power of calomel given at the inception of the disease, at least to influence favorably its subsequent course. Naph-

thaline, given in frequently repeated doses, to the amount of sixty grains daily, has also failed in any abortive effect.

Rest, quiet, fresh air and a very carefully regulated diet of mixed liquid food constitute the general treatment. Increased fever and intestinal irritation frequently have been observed to follow the ingestion of large quantities of raw milk, and in such cases a reduced amount of peptonized milk has been given.

The symptomatic treatment may be summarized as follows: Urethan is considered by far the safest and most efficient hypnotic. Its not sufficiently well recognized antipyretic properties increase its value. It is given in doses of thirty to forty grains, repeated in an hour or two, if necessary, to relieve insomnia. Believing that excessive diarrhœa has its source often in the presence of undigested food in a catarrhal inflammation of the bowel in addition to the specific lesion, the stools are carefully examined in such cases. The presence of curds demands a more careful regulation of the diet. A combination of naphthaline and bismuth has been found efficient in controlling the catarrhal inflammation and in correcting fetor.

Recognizing the fact that paralysis of the bowel and thereby obstinate constipation may proceed from a deep ulceration, laxatives are not given after the first week or ten days. Small enemata every other day are used to relieve constipation. Since the discovery of the new group of antipyretics they have been employed, almost to exclusion of baths in any form, to control what is believed to constitute harmful continuous pyrexia.

The general rule adopted is to give antipyretics only when the temperature reaches 103°. Kairin, hydrochinon, thallin, antipyrin and antifebrin have been successively used and their effects very carefully observed. As the result, antifebrin is at present almost exclusively employed. Very exceptionally have any ill effects followed its use.

For combating heart failure, alcohol is chiefly relied upon. Where heart weakness proceeds from degeneration of muscle fibre, a minimum effect may be expected from any method of treatment; if failure is chiefly due to impaired nerve force or influence, which is more often the case, the use of alcohol gives the happiest results. Alcohol is rarely given in the early stages of the disease, very commonly in the third and fourth week. Many cases are treated throughout without its employment. Its use is restricted to combat

special symptoms. Sir William Jenner's rule is largely the guide in its administration: "When in doubt in an individual case of typhoid fever, abstain from giving it; where there is a question of the larger or smaller dose, prescribe the latter."

Dr. Beverley Robinson's general treatment of typhoid fever is expectant; he does not believe that there is any known specific for this fever and is very doubtful as to the power of any drug, in use at the present time, to abort this disease. His treatment naturally depends upon the stage of the malady at the time it comes under his care, and whether it has a tolerably mild course without complications, or whether the disease from the beginning is marked by more than ordinary severity, and is accompanied by manifest departures from what is usual, and the complications indicate special severity of the attack, or march of the affection.

The cases of typhoid fever which he has treated for several years past, have been, as a rule, of moderate severity. Diarrhœa has been very frequent, temperature rarely going beyond 104° at any time, and then only during brief periods, heart complications have been occasional, pneumonia rare, and nervous symptoms showing either ataxia or great adynamia, in relatively few instances; he recalls not more than three or four cases of intestinal hæmorrhage.

In the incipient stage of typhoid fever a mild saline cathartic, preceded by one or two grains of calomel, or double that quantity of blue mass, is prescribed. Later, and so long as the development of typhoid fever appears doubtful, small doses of aconite, ammonia and spirit of Mindererus, or neutral mixture, are the means he employs to subdue febrile excitement. If fever still continues, with marked elevation of temperature in the afternoon after a few days, and other symptoms point more surely toward the typhoid state, these agents are abandoned for tonic doses of quinine, milk diet, which is insisted upon, and occasional tepid sponging of the trunk and limbs with lukewarm water and vinegar. Complications are treated as they arise, bronchitis, or pneumonia, with tincture of iodine, turpentine stupes, or Corson's paint to the chest walls; chloride of ammonium, moderate doses of digitalis and moderate stimulation with whiskey internally. If the heart becomes irregular or notably weak and frequent, or a blowing murmur shows itself at the apex, he now orders tincture of strôphanthus in five-drop doses every six hours, besides using mustard poultices or dry cups to the

chest, and beginning, continuing, or increasing the alcoholic stimulant. Nervous derangements are influenced favorably by ether in the form of perles, by musk, or by a mixture of lavender, chloroform, ammonia and camphor. Hæmorrhage is controlled with turpentine and opium. High temperature is controlled by antifebrin in five-grain doses, repeated two or more times in the twenty-four hours, or whenever the body temperature goes beyond 103° Fah. in the axilla.

The diet is usually limited to milk during the duration of the fever. This is given to the patient every two hours, as much as he will drink; nausea, or disgust for food, being to some extent relieved by the addition to the milk of lime-water, Vichy, or Vals water, or by the alcoholic stimulant administered at the time. If nausea persists and the patient becomes very weak and prostrate, dry champagne is given frequently in small doses. Occasionally black coffee has worked wonders in bringing back to life patients who appeared almost moribund. Solid food, as a rule, is not allowed until all febrile reaction has been absent at least one to two weeks. When begun, he is now using with favorable results what is known as albuminoid food, which seems to be tolerated by the stomach and bowels more readily than beef peptonoids of a somewhat similar character. At a later period, if the albuminoid food and the beef peptonoids have been well supported, and, especially, if no recurrence of the fever take place, farinaceous food is permitted and a small quantity of the light meats once a day.

In very few patients has he found the necessity at any time to treat their febrile condition by means of systematic cold bathing, and he regards this treatment as ill-adapted to the large majority of typhoid fever cases met with in New York City, either in hospital or private practice. Whenever hypostasis of the lungs involves these organs in a considerable degree, he believes frequent inhalations of oxygen gas to be a measure of great practical utility in giving to patients some additional chances of preserving life otherwise imminently imperilled.

The Massachusetts General Hospital.—The plan of treatment of typhoid fever carried out in Dr. Frederick C. Shattuck's wards has again become chiefly a symptomatic one. This summer he tried in six or eight cases the administration of naphthaline, eighty grains a day in divided doses, ten grains of calomel being given immedi-

ately on admission to the ward. It has been claimed by some that early cases may sometimes be aborted in this way. One patient thus treated, presenting the important early symptoms, recovered in three or four days; and so did another who received no medicine whatever.

Among the points in connection with typhoid fever in regard to which we are still very ignorant is the question of fact. Does the disease ever abort spontaneously, or in consequence of treatment? Dr. Shattuck gave up the naphthaline treatment because he could not see that in cases in which it received a thorough trial it was productive of any good result, while in two cases it caused strangury, in one other hæmaturia.

This year he has also discontinued the systematic use of internal antipyretics, ordering them only when the temperature is very high and the patient very restless, or, in his judgment, suffering in some other way directly from the effects of the temperature. These indications are seldom present.

Diet: Six ounces of milk are given every two hours. If this is not well borne, lime-water is added, or the milk is peptonized; or, if there is no diarrhœa, animal broths are allowed. When the evening temperature reaches the normal point, patients who have been on an exclusive milk diet are given broths, then raw eggs, then light farinaceous articles, and meat is permitted toward or at the end of the first week of convalescence. Stimulants are given in such quantities as the pulse, the tongue and the nervous symptoms may seem to demand.

In cases characterized by constipation, a large percentage the past two years, a plain water enema is given every second day. For sleeplessness and diarrhœa opium is the main reliance. In intestinal hæmorrhage opium is given in sufficient quantity to narcotize the patient, stimulants are used according to the pulse, and ergotine is injected under the skin. To moderate the temperature, stimulate the nervous centres, and promote the comfort of the patient, he is sponged with water at a temperature of 60° – 75° , every two hours if the temperature is 103° or more; every three, four or six hours, according to circumstances, if it be below that figure. Sometimes alcohol, or alcohol and water, is substituted for the plain water baths once or twice a day.

It will be seen by the above that the aim in treatment is simply to conduct the patient to recovery, safely and as speedily as is compatible with safety. A certain percentage of patients receive neither drugs

nor stimulants, a certain proportion stimulants only, and a certain proportion both drugs and stimulants.

Dr. R. H. Fitz, during the past summer made a few attempts in his ward to test the asserted value of naphthaline in checking or overcoming the progress of typhoid fever. The remedy was used in three-grain doses, every two hours during the first week of the fever. There was no evidence that any benefit resulted.

Although given in capsules, nauseating eructations were, at times, complained of, and the size of the capsule was inconvenient. The disadvantages being conspicuous, without any evident corresponding gain, the use of the naphthaline was soon discontinued.

Of the newly discovered antipyretic drugs, antifebrin was the one usually employed when there were special indications for their use. The artificial maintenance of a low range of temperature throughout the course of the disease was not deemed important. If an elevation of 105° Fah. was reached, a sufficient quantity of antifebrin was given to lower the temperature four or five degrees. The production of chilly sensations was considered undesirable. A single dose of five grains often sufficed. If necessary, this dose was repeated at intervals of an hour until fifteen grains were taken. Doses of three grains were found of great benefit in relieving the headache so frequently occurring in typhoid fever. There was no necessarily simultaneous falling of the temperature.

The routine treatment of all cases consisted in a carefully regulated diet and the use of cold sponge baths every two hours. The diet was chiefly milk, as nearly four ounces every two hours as possible. If the milk was not well borne, it was pancreatized or mixed with lime-water. The use of the exclusively milk diet was maintained until the temperature remained normal for at least a week. Beef tea, strained soups and broth were then added, and, in the course of three or four days, soft puddings, eggs and bread.

In the third week of normal temperature there was no restriction as to diet, with the exception that the most nourishing and easiest digested foods were ordered.

Wine or brandy was given after the first week whenever a weak pulse or excessive nervous debility was present.

Dover's powder or morphine urethan and chloral were used as hypnotics, the former, where sleeplessness was accompanied with pain, the latter, where pain was absent.

Constipation was a frequent symptom, and was invariably relieved by enemata as often as once in three days. In one case irrigation of the colon, twice daily, became necessary. During convalescence a change of diet was often an efficient means of insuring a normal evacuation.

Profuse diarrhœa was controlled by liquid preparations of opium, and intestinal hæmorrhage was checked by ten minims of laudanum every two hours.

The Montreal General Hospital.—The cases of typhoid fever treated in Dr. George Ross's ward include a larger proportion of severe and very severe than perhaps elsewhere—the reason being that, owing to the great prevalence of the disease in Montreal at certain seasons, and to the limited accommodation, it is a necessity to refuse a considerable number and receive only those most urgently requiring care. If we come, therefore, to look at the mortality, this important fact must be borne in mind. Here any method of treatment which will give results approaching the average in other places, must deserve confidence, seeing that we deal with carefully selected bad cases.

The treatment is based upon what might be called an "intelligent expectancy." The diet is composed exclusively of milk and rice-water. The amount of milk consumed daily is not considered immaterial. It is not deemed prudent to allow, as is often elsewhere done, milk *ad libitum*. On the contrary, the daily quantity is strictly limited, in the case of adults, to three pints per diem. This amount is found sufficient to meet the wants of the economy, whilst the ingestion of more leads to the danger of accumulation of feces and aggravation of symptoms. The milk is frequently diluted with rice-water, or, if thought well, with lime-water. When the stomach is weak, benefit is obtained by artificial digestion of the milk, but the great majority drink pure milk and appear to assimilate it without difficulty. It is a rule to nurses to supply cold fresh water or ice-water to typhoid patients freely, and, during the height of the fever, pellets of ice to suck. When a patient is delirious or unable to make known his wants, he is still to have cold water given him frequently and freely. It is believed that strict attention to this apparently simple item is really a matter of considerable importance. It is a fixed rule to allow no change from a milk diet until the patient's temperature has been normal both night and

morning for at least eight consecutive days. During the early stages, and until a material fall in the temperature has taken place, cold sponging of the entire body is carried out every three or four hours, as the case may require; and constant cold is applied to the head by means of a coil through which ice-water flows. These measures are relaxed as the temperature falls and the symptoms improve.

In mild cases, or even in those of moderate severity, but running a course approaching to the type, alcoholic stimulants are not given, except in small quantities during the later stages; but in all those showing a higher grade of fever, as marked by an elevated temperature and signs of vital depression, whiskey and brandy are employed in amounts varying with the special indications of the case. When the prostration is marked, and the nervous symptoms severe, stimulants are given freely.

As regards medicines, a favorite prescription is one containing gr. ij. each of acid. carbolic pur. and tinc. iodin., well diluted in water every two hours. It is a rare occurrence to meet with discolored urine from this remedy. No striking results follow its administration. In the latter stages, quinine in tonic doses, with or without digitalis, is given. When a case is seen sufficiently early, a full purgative dose of calomel is found to be useful in unloading the *primæ viæ* and preparing for the siege. We find a large proportion of our patients constipated rather than suffering from diarrhœa. The bowels are never allowed to remain quiescent for more than three days at most. More generally two days only are allowed between evacuations, which, if necessary, are obtained by means of enemata. These are greatly preferred to laxative medicines. In approaching convalescence, great caution is exercised in administering a purgative, since rapid elevation would seem sometimes to follow directly after even a dose of castor oil. The presence of prominent symptoms often leads to the medicinal treatment being, for the time, entirely directed toward counteracting them. For instance, if there be marked gastric irritability, bismuth, bicarbonate of soda, and such like drugs, with effervescent, are given. If the case be especially marked by bronchitis and pulmonary congestion, turpentine in emulsion is relied upon. If tympanites be considerable, charcoal is found very useful, sometimes turpentine, together with limitation of the food for a time, and attention to the bowels.

If muscular tremor, delirium and insomnia are a marked feature, such remedies as camphor, valerian and ammonia are given at frequent intervals. Of the complications, hæmorrhage is treated by ice, gallic acid, digitalis, or lead and opium, and the external application of an ice-bag. In peritonitis (without perforation) opium is given in moderate doses, and without any bad effects. When perforation is known to have occurred, hypodermatic injection of morphia and hot applications.

The use of quinine in antipyretic doses, during the active stages of fever, has been entirely abandoned. In some of those unaccountable "excursions" of the temperature which we are apt to witness during commencing convalescence, full doses of quinine are used with very good effect. Of other antipyretics, antifebrine has had a moderate trial in this disease by some members of the staff. The conclusion arrived at seems to be that the sudden depressions of temperature produced by the drug do not in any way modify the course of the fever, which only subsides at the same time as if this had not been employed. In some cases decided antipyretic action could not be obtained from it. In others its ill effects, cyanosis and cardiac depression, were witnessed, but not to an alarming degree.—*Medical News.*

THE TREATMENT OF HYPERTROPHY OF THE PROSTATE.

It is well known that about 30 per cent. of all men above fifty-five years of age are suffering from enlargement of the prostate, but nothing like 30 per cent. of men of this age ever apply to a surgeon for assistance. It is true that many suffer more or less from symptoms which the surgeon would know pointed to prostatic hypertrophy, but these symptoms are not sufficiently severe to prompt the sufferer from them to seek for surgical relief. We must, then, look for some reason which will explain the difference between the two classes of cases, both suffering from prostatic hypertrophy, the one with and the other without symptoms. That this difference does not depend on mere size, is a certain fact.

Mr. A. F. McGill, in a lecture delivered in the Leeds Post-Grad-

uate Course (*Lancet*, February 4, 1888), pointed out that there are three forms of enlarged prostate that give rise to characteristic symptoms. These three forms have one common characteristic, they all protrude into the bladder-cavity—a matter of great importance, since it indicates that in radical operations the prostate must be attacked from within the bladder, and not from the outside, by perineal incision. The varieties consist: 1. Of a uniform circular projection surrounding internally the orifice of the urethra, and, according to Mr. McGill, by far the commonest variety, although not described in many modern works on the subject. 2. A sessile enlargement of the middle lobe, situated partly in the posterior half of the prostatic urethra and partly in the position of the uvula vesicæ. It is usually small in size. 3. A pedunculated enlargement of the middle lobe. The outgrowth springs from the prostate immediately behind the urethral orifice. It varies much in size, and the peduncle by which it is attached varies also. Indeed, no distinct line can be drawn between this variety and the preceding one, as the two forms gradually merge into one another.

The mechanism by which the symptoms in these different varieties of enlarged prostate are produced is different. In enlargement of the middle lobe it is evident that the sessile variety acts mechanically by blocking up the posterior half of the prostatic urethra, as well as the urethra orifice, while the pedunculated variety forms a valve, which will be washed forward with the stream of urine at every attempt to micturate, and by blocking up the opening prevent, to a greater or less extent, the passage of urine into the urethral canal. When the obstruction is due to the formation of a uniform circular growth, projecting into the bladder and surrounding the urethra at all sides, when urination is attempted the bladder-walls contract, and its fluid contents are forced on to the outer surface of the projecting collar, the urethral orifice is thus closed, no urine escapes, and the more forcibly the bladder contracts the less the likelihood of voiding urine. In such cases the patient soon learns that violent efforts prevent micturition, and being unable to relieve himself, soon ceases his efforts; the pressure on the valve is immediately arrested, the urethra is opened, and the urine flows away in a feeble stream. If, again, he attempt to accelerate the flow again, it is suddenly arrested, so that there is always a chance of an incomplete evacuation of the bladder. As a consequence this residual

urine greatly increases in amount, the wall of the bladder becomes thickened, and this increases instead of diminishes the difficulties attending the act of micturition. At the same time some slight cause may induce cystitis, and, causing tumefaction of the urethral orifice, give rise to an acute attack of retention. In any case, as time progresses, the muscular fibres of the bladder become separated from one another and greatly wasted, this condition being marked by the involuntary passage of urine, or, as it is better termed, overflow. This symptom at first only occurs during sleep; but, as the atony increases, the expulsive power is almost lost, and a constant dribbling is the result. The orthodox treatment of enlarged prostate consists in teaching the patient to pass a soft catheter for himself once or twice daily. When this treatment is successful nothing more is required.

Many patients live for years, and, beyond the slight annoyance of the daily catheterism, have no further discomfort. But, unfortunately, this is not always so. The treatment not unfrequently breaks down. From some cause or other—perhaps from want of care in cleaning the catheter, and perhaps from some hidden cause which we are unable to ascertain—the urine becomes thick and offensive, intense desire to empty the bladder and inability to do so necessitate a more frequent catheterism, till rest is constantly disturbed and death is rendered imminent. In another class of patients the treatment cannot even be adopted. The patient, often belonging to the working class, has, from carelessness, procrastination or inability to face the necessary expense, delayed seeking for surgical aid till his symptoms become urgent. He has retention of urine, is suffering from extreme pain, and must needs seek relief. The surgeon relieves him by passing a catheter, and, when the acute symptoms have subsided, attempts to teach him to pass one for himself. But he fails in this endeavor. Whether it be from innate clumsiness, natural timidity, or from the inherent difficulty of the case, the patient is unable to introduce the instrument, and treatment by self-catheterism cannot be adopted. It is under these circumstances that the author advocates the trial of a new operation which he recently described in a paper read before the Clinical Society under the name of “Suprapubic Prostatectomy.”

The operation consists of two parts: (1) The opening and drainage of the bladder; and (2) the removal of the prostatic valve

which prevents the egress of urine. By opening and draining the bladder, inflammation of that organ is immediately relieved, urine, if putrid and offensive, becomes in a few hours sweet and acid in reaction, and unless the kidneys are diseased, and in some cases even if this is the case, a speedy convalescence takes place. The only question to discuss in relation to this procedure is whether perineal or supra-pubic drainage is the more effectual. The author's experience leads him to think that the latter is the preferable method, and that drainage is more complete when through the soft yielding tissues above than through the hard fibrous tissues below the pubic arch. The high incision has, moreover, this advantage—it enables a more thorough examination of the interior of the bladder to be made and the second step of the operation to be proceeded with. It is absolutely impracticable to remove the collar-like valve, which has been already described, through a perineal wound.

The operation is performed as follows: A full-sized silver catheter, curved according to the nature of the case, is passed into the bladder, its contained urine is withdrawn, and its cavity washed out with a warm saturated solution of boracic acid till this is returned clear and unchanged. In this way it is insured that the wound to be made in the abdominal wall shall not be contaminated by septic urine. A pyriform rubber bag is now introduced into the rectum and filled with fourteen ounces of warm water. Boracic lotion is next injected through the catheter till the bladder can be distinguished as a hard oval swelling, extending upwards towards the umbilicus. The quantity of fluid injected varies with each case, from eight to fourteen ounces being the usual quantity. The catheter is retained in the bladder, the fluid being prevented from escaping by forceps applied to compress the rubber tubing attached to it. The pubes having been shaved and the skin on the abdomen properly cleansed, an incision is made, three inches in length, extending upwards from the pubes in the middle line of the body. The linea alba is divided for the same distance. Without further dissection, by escaping with the handle of the scalpel, the bladder is exposed, and an assistant, by depressing the catheter, makes it project into the wound. A tenaculum with a large curve is passed transversely into the bladder, touching as it goes the point of the catheter. A longitudinal incision is made from above downwards in the bladder-wall, and the escape of its fluid contents is prevented

by plugging the opening with the left forefinger. This being done, the bladder is seized with nibbed forceps, one applied on each side of the incision, the catheter is withdrawn from the urethra and the bag from the rectum, and the first part of the operation is complete. It is important to remember that it is not wise to cut down on the point of the catheter until the bladder has been fixed in position by the tenaculum. If this be done, the point of the catheter protrudes from the wound, the fluid escapes from the bladder, while the viscus itself sinks deep in the pelvis, from which it is only dragged with considerable difficulty. We now examine the interior of the bladder and its neck to ascertain the exact nature of the prostatic enlargement. It is possible that we may find a condition which does not permit further operative interference. The author's experience is not sufficiently large to enable him to say whether this will be often the case or not. His belief is that it will be extremely rare. If we are unable to do anything further, we must content ourselves with temporary or permanent drainage. We shall, however, in a large majority of cases, find one of the three forms that have been already described, each of which is removable. A pedunculated middle lobe can obviously be removed with ease, its pedicle being divided with curved scissors. A sessile middle lobe can be removed in the same way, helping the scissors by tearing with forceps. The collar enlargement is removed with greater difficulty. It is advisable to divide it longitudinally by inserting one blade of the scissors into the urethral opening and dividing the portion above, and then passing the other blade into the same opening and dividing the portion below. We now have that part of the gland which projects into the bladder divided into two lateral halves; these can be removed separately by scissors curved on the flat, or enucleated with the tip of the forefinger. Care must be taken not to leave any portion of the projecting valve untouched. When the operation is complete, whichever form of growth has been removed, it is advisable to see that the urethra is patent, and to pass the forefinger as far as the first joint into its canal. The hæmorrhage which occurs is not excessive; this is accounted for by the fact that the prostate is not a very vascular organ; the so-called prostatic hæmorrhage which occurs occasionally in operations on the perineum being derived from the prostatic plexus of veins, which cannot be wounded in the operation now being described. Such bleeding as

occurs is speedily arrested by injecting a hot antiseptic solution. When this has been done, a large rubber tube is passed into the bladder and left out of the lower angle of the wound in the abdominal wall; this is partially closed by a point or two of suture, and a large pad of salicylic absorbent cotton-wool is applied as a dressing. The pad is renewed as often as it becomes saturated every three or four hours. The tube is removed at the end of forty-eight hours.

Mr. McGill's experience of this operation is limited to five cases, in each of which before operation constant catheterism was required. In two the urine was purulent, alkaline and fetid, while in one symptoms of uræmia and surgical kidney were present. Four of these cases made quick and satisfactory recovery, while the other, a very recent case, is still under treatment. The successful cases all left the hospital in restored health, passing urine without the aid of a catheter in a natural manner. Two of the cases were operated on eight months ago, and have not in any way deteriorated, no stricture resulting. Of course, if the ladder be atrophied and the kidneys diseased, only temporary relief may be expected; but if, on the other hand, the bladder and kidneys are in a healthy condition, we may hope that this operation will in many cases lead to a radical cure.—*Therapeutic Gazette*.

STUDIES IN THERAPEUTICS.

RECENT CARDIAC TONICS.

Digitalis still holds its own as the most powerful heart tonic which we as yet possess, and the most permanent in its effects. But its use is more or less contra-indicated in certain forms of disease of the heart; and, on the other hand, it is sometimes found that digitalis is not well tolerated even in cases apparently suitable. In fact, a watchful care is required whenever this drug is given, not only at the beginning of treatment, but as long as it is continued, because alarming symptoms may arise at any time during its use, although its so-called "cumulative" effects are questioned by several recent observers. Of late years ceaseless efforts have been made to find

some other means of strengthening the heart's action safely as well as certainly in cases of failure of compensation.

Oertel, dispensing with drugs altogether as far as regards the heart, effects this by muscular exercise, graduated to suit the patients. He finds hill-climbing to be the best means of stimulating the heart muscle to increased action, and thereby promoting increased growth of its fibres. The excess of water connected with venous stasis is for the most part previously removed from the blood, and altogether it will be found that the treatment adopted is exactly that calculated to put the patient "in good condition," just as a horse is trained for racing. Grooms are sparing in the amount of water they give to hunters and racers during severe exertion; when cool the animal will not drink too much even with water constantly before him. But man is a very different animal, and there is no doubt that most people imbibe much more liquid, of one sort or another, than is necessary for the physiological requirements of the body. Oertel's work on circulatory disorders is now to be had in English, and it is to be hoped that it will receive the serious attention which it deserves, but which it has not yet obtained in this country. The manner in which the heart muscle grows larger under increased exertion still requires explanation. Stricker is of opinion (*Vorlesungen*, 1883) that together with impulses to the motor of the body during work, impulses are also communicated to the vasomotor nerves of the viscera, causing a rise of blood pressure, which would explain the persistency of the increased blood pressure, after the exertion is over. Nothnagel attributes this increased blood pressure to compression of the peripheral vessels during muscular exercise, and, moreover, regards the increase of carbonic acid in the blood caused by work as a stimulant to the heart. Practically speaking, it is of course understood that hill-climbing is only suitable in cases of insufficiency of the heart muscle when this condition is not too far advanced; if this be the case, Nothnagel very properly calls the method a "two-edged sword." But Oertel does not advocate sending a patient—for example, with severe valvular derangement, an irregular pulse and œdema about the ankles—straight to the mountains to be walked up and down. Von Bamberger advocates Oertel's method, but he also would confine its application to commencing insufficiency of the heart muscle, with or without valvular derangement.

The double salts of caffeine, as examined and recommended by Riegel, have attracted some attention as a means of strengthening the heart's action; but their use is not altogether free from danger, and again they sometimes fail wholly in effect. They have not succeeded in coming into general favor.

Sparteine (sulphate) is the next claimant of our attention. Sparteine is a base derived by Stenhouse from *spartinum scoparium*, and pronounced by Mills to be a tertiary diamine having the formula $C_{15}H_{26}N_2$. It is a colorless alkaline liquid, boiling at $287^{\circ} C.$, of penetrating, disagreeable odor and very bitter taste. It is heavier than water, and only slightly soluble therein, easily soluble in ether or chloroform. It forms crystalline salts with acids, from which it is precipitated by alkalis. The sulphate is the best salt medically. Fick studied the action of sparteine on the animal organism, and Froumüller established its diuretic effect. Recently it has been rescued from oblivion by Germain Sée (*Comptes Rendus*, 1885, No. 21), who recommends it warmly as a cardiac tonic. This observer declared that sparteine had a stronger effect in prolonging systole and increasing the energy of the cardiac contractions than even digitalis or convallamarin; also that rhythmic action was reëstablished, and that the pulse was rendered fuller and slower. A diuretic effect was not observed. Voigt (*Wiener med. Blätter*, 1886, Nos. 25-27) concluded that sparteine was a valuable drug, worthy to be placed beside digitalis, but that it had not the persistency of the latter in its effects, which, however, were superior to those of caffeine, adonis vernalis and convallamarin. Increased diuresis frequently resulted, but in this respect sparteine was easily exceeded by other medicines. Voigt recommended sparteine in insufficiency of the heart muscle, with or without valvular disease, in pericarditis, and as an adjunct to digitalis, or rather an occasional substitute. Leo (*Zeitschrift f. klin. Med.*, 1887, p. 143) found that sparteine acted as a powerful diuretic, and was beneficial in exactly those cases in which digitalis failed. The diuretic action Leo ascribes to direct irritation of the renal epithelium, and not to the increased blood pressure from increased cardiac action. Palpitations and cardiac asthma were much relieved, but whether from some narcotic influence or from increased cardiac action, is left undecided. The last observer in this department is Dr. Prior, Docent in the University of Bonn (*Berliner klin. Wochenschr.*, 1887, No. 36).

According to Prior, sparteine only occasionally acts as a diuretic in health; and this effect is probably due, when it occurs, to increased blood pressure. He found it to act better in valvular failure than in simple insufficiency of the heart muscle from other causes. Its effects were, on the whole, fairly constant, rapid and marked, but did not persist long. In some cases the heart's action was regulated for a long time by sparteine, the urine being increased, and œdema diminished or removed. Dyspnœa and palpitation were relieved within two hours, often less, in severe cases of heart disease, even when the heart's action was unaltered; but the drug was of no use in bronchial asthma. A grain and a half of the sulphate was found the best to begin with. No cumulative action was made out. Prior advocates the use of sparteine sulphate in those cases in which digitalis has failed to do any good; also when it is required to relieve severe stenocardiac attacks as speedily as possible, as sparteine often effects this even when the heart's action is unaltered by it. He also regards it as a valuable diuretic.

We have not space for convallamarin and some other drugs, but will conclude with a few words on strophanthin, a powerful rival to digitalis. Fraser first isolated the glycoside strophanthin from *strophanthus hispidus* (Kombé), and has written more than once about its uses. But it is only recently that the plant has been imported from Africa in sufficient bulk to allow of general investigation. At present *strophanthus*, whether the tincture or strophanthin be used, is the strongest rival against digitalis in the field. Zerner and Löw have recently reported on the new drug in the *Wiener med. Wochenschrift*, No. 36. They support Fraser in his assertion that, unlike digitalis, *strophanthus* preparations do not cause arterial contraction. As regards the heart, diastole is prolonged, while systole is rendered shorter and more energetic. Irregularity of the pulse usually disappears under the use of *strophanthus*, but sometimes only a slight improvement in this respect is obtained. They found that for hypodermic injection of strophanthin a milligramme (a little under a sixtieth of a grain) was a moderate dose, but preferred to give it by the mouth in doses between the thirtieth and the sixteenth of a grain. Experiments showed that in health no appreciable diuretic effect was exerted, while in disease the urine was often considerably increased by the use of strophanthin, and sphygmographic tracings showed that this effect was due to increased

cardiac action, causing increased blood pressure. In one case of pleuritic effusion, increased diuresis persisted for some time, the patient taking forty-five minims daily of tincture of strophanthus acts as an irritant to the healthy kidney; and, as above remarked, ascribe its effects solely to increased cardiac action. They are also against Fraser in his assertion that it is able to lower the temperature of the body, as they tried in vain to obtain this effect in bad cases of pneumonia. Indeed, unless in the stage of collapse, when strophanthus is eminently useful from the rapidity of its effect in stimulating the heart, they consider that this medicine is contraindicated in pneumonia and fevers generally. The tincture is well tolerated if a little syrup of orange peel be added; a slight diarrhœa may follow, often beneficial; but strophanthin causes no discomfort in the proper doses. One case of myocarditis, with pulmonary and hepatic congestion, was cured by strophanthus after digitalis had been tried in vain. Two cases of fatty degeneration of the heart, which were not very far advanced, were also greatly benefited; but in a third extreme case no advantage was obtained from the drug, there being scarcely any heart muscle left to act upon. But it is in valvular disease with failure of compensation that strophanthus is so useful. In one mitral case the writer was surprised at the earnestness with which the patient begged for "more of the last medicine." He had been taking digitalis for sometime previously without any marked benefit, but felt better after every dose of strophanthus, and his pulse became regular at once. Strophanthus does not appear to possess any "cumulative action," but time is required to show how far its undoubtedly good effects in appropriate cases are persistent.—*British Medical Journal*.

OXYPHENATE OF MERCURY IN SYPHILIS.—Dr. Chadek has used this preparation hypodermically in an emulsion of two parts of the salt with 100 parts of gum arabic mucilage. He finds these injections less painful than those of any other salt of mercury. Absorption was very rapid; after a single injection, traces of mercury were found in the urine. The author cites 10 of his own cases and 12 reported by Dr. Troitzki, representing the various forms of syphilis, in which the treatment was very successful.—*Med. Obsr.; Bull. gén. de therap.*

LITTLE THINGS IN MEDICINE.

(No. II.)

By FREDERICK A. CASTLE, M.D., New York.

Although I agree, in the main, with the suggestions made under this title in the February number of the NORTH CAROLINA MEDICAL JOURNAL by N. B. Herring, M.D., there are two things about which I believe he is mistaken. He says:

"Pinch up the muscle with the thumb and finger and press the needle perpendicularly into the muscle from half inch deep to the whole length of the needle, according to the size of the muscle."

This I believe to be bad advice, for in my experience of more than twenty years in giving hypodermic injections, next to the importance of having a clean instrument is that of *avoiding* injecting the solution into *anything* but subcutaneous connective tissue. I have given a great many hypodermic injections in hospital and private practice, and have had occasion to teach others how to do it, and I have *never* seen excessive pain, indurations nor abscesses result when these two precautions have been observed. On the contrary, I have seen hypodermics administered in the manner described by Dr. Herring with frequent results such as I have mentioned. Moreover, patients find his method decidedly objectionable on account of the soreness, short of resulting in abscess, which this method usually causes.

It used to be thought quite the correct thing, in Bellevue and other New York Hospitals, for members of the house-staff to probe the patient in any accessible spot with the whole length of a hypodermic needle and to expel the fluid as the needle was withdrawn, the expert aiming at accomplishing the withdrawal of the needle as quickly as it was inserted, and the whole thing was accomplished with a rapidity which left the patient rather unconscious of the real nature of what had been done.

Since then it became the fashion to insert the needle under the skin of the fore-arm, in preference to any other part, because, I presume, it was most accessible, but to this I also object, as in the event of any soreness resulting, the location is more liable to come in contact with surrounding objects.

The best plan is to pinch up a longitudinal fold of skin over the insertion of the left deltoid, or in its neighborhood, and pinch it *firmly* so as to lessen the sensibility of the skin, and then insert the needle from below upwards, and as nearly parallel with the surface of the limb as possible, using care that it enters the connective tissue and not a vein, fascia, muscle or nerve, then release the fold of skin, and make sure, before proceeding to expel the fluid, that the point of the needle is *in* the connective tissue, and then slowly inject the desired quantity of solution; withdraw the needle gently, and with a finger rub the skin over the site of the injection for a few moments.

Second. If the doctor will use an oleate of quinine he will have no trouble in securing its ready absorption. I have repeatedly caused cinchonism about as rapidly in the case of children by this method of administering quinine as by giving it by the mouth. Four minims of a 25 per cent. oleate correspond very nearly to one grain of the sulphate, and twenty minims can be absorbed by the skin of the abdomen in a very few minutes and with very little friction.

55 East 52d St., New York, March 16, 1888.

THE TREATMENT OF HEMORRHOIDS by Injections of Carbolic Acid and other Substances, by Silas T. Yount, M.D., La Fayette, Indiana. The Echo Music Company, 1888. This is an essay dressed up in book form, upon a subject which seems to have a big run "out-West," hence the necessity of so many booklets and pamphlets. This one has several wood-cuts, two of which are tinted.


"ERGOT MILLS."—What do you think! Our British cousins have gone to grinding their ergot at the bed-side! We see a notice of this in a late *British Medical Journal*, and it sounded odd enough. Some one has devised a mill which they carry in their obstetric bags.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
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THOMAS F. WOOD, M. D., Wilmington, N. C.,	} Editors.
GEO. GILLET THOMAS, M. D., " "	

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

A MICROSCOPICAL SOCIETY IN NORTH CAROLINA.

We present to our readers a "Call" to form a Microscopical Society, from the pen of a distinguished student. We trust that enough members will go to the Fayetteville meeting with matured thought upon this matter to complete an organization, so that many of the membership of our Society may be stimulated to systematic study of the microscope. If there are many skilled microscopists in the Society we have not been so informed, so that most of the gentlemen who associate themselves in this study will begin almost at the beginning.

Most physicians think they have no time for such study, but they

are not generally the busy men—busy men always make time for matters of importance. We believe that all physicians should have some field of study which will bring them intellectual recreation. "All work and no play makes Jack a dull boy." The danger is that we work too hard money getting, or slave too hard to keep our practice together, until, like Dr. Golding Bird related of himself, with all the prosperity of a practice, we find ourselves physical wrecks. If, now, we give ourselves to work in earnest, we also perform the duty to our patients and our families of taking a well-considered time for recreation to the mutual advantage of both. Some physicians already devote time to recreation as a matter of principle, and for the most part this time is spent in acquiring more knowledge of the art of medicine. If, now, this recreation could take the shape of some collateral study bearing upon medicine, and open up new avenues of thought, increase the powers of observation and manual dexterity, the physician would be benefitted, and not feel that his time is wasted. There are one or two fields in which this very recreation lies, one the study of botany or chemistry, the other the study of the microscope. We will not go so far as to say that these are essentials, but we do say that the study of either of them will greatly enlarge the physician's intellectual powers and afford abundant intellectual pastime. We do not leave out of consideration that the temptation is strong to neglect regular work for a hobby, for we all know that we are apt to be proudest of the knowledge we have of subjects in which we are only dabblers, but with due knowledge of the dangers we can easily avoid allowing our hobbies to cause us to neglect duties.

We are not going to enter into the advantages to the physician as a clinician that the microscope makes possible, we will leave that to the promoters of the organization above mentioned, and leave the subject to the consideration of our readers.

FEEDING IN TYPHOID FEVER.

We have given space to the treatment of typhoid as pursued in hospitals in New York, Philadelphia, Boston and Montreal, because of the frequent recurrence of this disease in all parts of the world,

and the consequent interest which attaches to its treatment. We cannot fail to notice the tendency to apply new remedies and a somewhat strained effort to make these new remedies agree with hypotheses about the pathology of disease. The special point, though, about which we desire to speak is the excessive feeding with milk as practiced in the

HOSPITAL.

Dr. Frank Duffy, in his admirable essay on feeding in fevers, read before the Medical Society at Charlotte, set forth the best practice as to the administration of food in such cases, and we are able to bear out his statement almost entirely. We have had a recent case of typhoid fever in which, after careful consideration, milk was selected as the most appropriate food, there being evidence that the patient had in health found milk digestible. About two ounces were given every two hours for several days, when on the day of the fever the temperature ran up to 105.2 F. The bowels had not been moved for two or three days and a dose of calomel was given, resulting in relief by the discharge of a mass of curds. The diarrhœa which followed for several days gave traces of flocculi of milk, and the temperature fell back to a safe average.

Milk was abandoned as an unsafe food, and one of the prepared farinaceous "foods" was substituted, which not only sufficiently nourished the patient, but kept the bowels in good condition.

Starchy foods are too often neglected in typhoid fever. Bermuda arrow-root starch, corn starch and rice flour make an excellent basis, and have the advantage of being easily made and little risk of being spoiled in the cooking. If to a thin starch gruel (salted) is added a teaspoonful of Trommer's Extract of Malt, or a good preparation of pancreatic extract to predigest it, flavored with a good red wine, such as is made by the Whiteville Wine Company (Mish, Thomas, Babson or some other seedling) scuppernong grape, it makes an acceptable food to most patients, and is a vehicle for as much alcohol as you may desire to give. Even without predigestion starchy gruels can be given with less risk to the patient than any animal food whatever, provided they are not made too thick.

Another small, but all-important thing needs to be mentioned here. See that your patient has sufficient water. A patient with typhoid fever can go a few days on water alone, and with decided

advantage, after an improper diet has been followed and which has run the temperature up to the danger line. Washing out the bowel with water enemata is a serviceable practice, to be resorted to every two or three days. Alcohol, although not to be given in a routine way, most always does good in the second, third and succeeding weeks of the disease, when only so much is given as can be burnt up in the system. Whiskey and such well-cured native wines as our Whiteville neighbors most always have in stock we have found very useful, because, as regards the latter, so generally agreeing with the stomach. Large portions of milk are now and then capable of doing so much harm—blocking up the bowels and undergoing butyric fermentation, with all its accompanying evils, that we consider it a duty to ask physicians to review their experience in the employment of milk in typhoid fever, and not venture on the amounts mentioned as employed in hospitals, until they have tested the ability of their patient to digest it.

QUININE—PRICE, PRODUCTION, ETC.—It is a curious fact that, while the annual supply of quinine for the whole world is about 6,000,000 ounces, the consumption of this drug in the United States is more than 3,100,000 ounces, or nearly one-half the entire product. The price of quinine has been so low for the past three or four years that large plantations of cinchona trees have been uprooted in Ceylon and the tea plant substituted. Ceylon produces a very large share of all the bark that is marketed, and the exports from that island declined more than one-third between 1885–1887.

THE Legislature of Virginia has passed a law that the possession of a diploma shall not constitute a license to practice medicine in that State. The license of the Board of Examiners is the only authority to practice, as it is in this State.

KEPHALGINA, a remedy for headache, consists of a mixture of antipyrin 5 parts, roasted coffee 5 parts, and caffeine and salicylate sodium each 2 parts, divided into 10 wafers.—*Rundschau Prag*.—*American Journal Pharmacy*.

REVIEWS AND BOOK NOTICES.

VASO-RENAL CHANGE VERSUS BRIGHT'S DISEASE. By J. Milner Fothergill, M.D., Edin. New York: G. P. Putnum & Sons, 27 & 29 W. 23d St. 1887.

The volume opens with a history of "Bright's Disease," beginning with the treatise on "Dropsy," by Dr. Blackall, of Exeter, in 1813, about thirteen years before the "Medical Reports" which contained the first clear idea of the association of dropsy and albuminuria with disease of the kidney. To this sketch is prefixed two beautiful colored figures of diseased kidneys, which are from the original of Dr. Bright.

Dr. Fothergill is always entertaining, always instructive, often aggressive in his writings.

We have here a very ingenious theory well stated and reinforced by sound practical illustrations, that Bright's Disease has its origin in "the uric-acid formation" hitherto termed "gout."

"The main permanent feature of Bright's Disease," he says (p. 17-18), are a tight artery, a large left ventricle, and the physiological outcome of high arterial tension, a large bulk of urine. These are well recognized clinical facts, as the works of Marey, Galabin, Mahomed and others have shown, as to high arterial tension. The *materies morbi* (uric acid, and in all probability accompanied by other forms of nitrogenized waste) in the blood irritated the vaso-motor system of nerves, has been recognized from the earliest day of acquaintance with this morbid change as a whole. But so far no attempt has been made (at least to the writer's knowledge) to associate the two, and see in what relation they stand to each other. Yet it seems that the two facts of the presence of *materies morbi* in the blood and high arterial tension stand in the most instructive relation to each other. They suggest that the first consequence may be really and truly a self-preservative depurative action on the part of the system. This is a somewhat startling matter at first sight, but the more it is looked at the clearer and more vivid does it become."

The above paragraph gives the clue to the author's belief as to the pathology of vaso-renal change.

He points out at some length the effect which civilization has had upon the change of constitutional characteristics of English people, showing that the tendency is from the Norse type to "the smaller neurotic Arab type," and that we do not commonly see the old-type gout, because of these changes going on.

"If a person possesses a functionally feeble or insufficient liver, that fact renders him or her liable to the uric-acid formation without any indulgence of the palate. Many persons who eat but little possess a great tendency to gout in some form in consequence of their liver disability," is a statement which will certainly arrest the attention of the thinking reader. The departure from the old type, it seems, has its manifestation in the altered appetite, the enfeebled digestion, this indigestion being a blessing in disguise, enabling the neurotic dyspeptic to escape from the gout by his inability to eat voraciously.

He divides the stages of vaso-renal change into three stages :

Norse Type.—Changes in the vascular system, joint-gout, rheumatism, chronic bronchitis, emphysema, eczema, secondary valvular disease in the heart.

Neurotic or Arab Type.—Digestive troubles, biliousness, skin affections, migraine, mental phenomena, cardiac neuroses.

Middle Stage.—Palpitation, angina pectoris vaso-motoria, epistaxis, atheroma, aneurysm, apoplexy, gangrene. Interstitial nephritis, tube-casts in the urine, albuminuria, glycosuria, etc.

Advanced Stage.—Lead arthralgia (more possibly owing to the excess of uric acid in the blood), occlusion of the coronary vessels, with fatty degeneration of the heart, arcus senilis, venous fullness, interstitial changes, dropsy, albuminuria, death.

We trust none of our readers who are in the habit of thinking for themselves will fail to read this volume, and see if they do not recognize in it the key to very many of the puzzling things which we are observing in the different deportment of old remedies in the course of a long experience. English people are very gross eaters as compared with Americans, but very much of what Dr. Fothergill says about them applies equally well to us.

ATLAS OF VENEREAL AND SKIN DISEASES, WITH ORIGINAL TEXT.

By Prince A. Morrow, A.M., M.D.

This is the third fasciculus of this elegant work of which we

noticed two parts in our last number. There are five plates figuring "Chancre of Fore Finger, with Syphilide of Palm, Chancre of the Female Nipple, with Syphilitic Roseola, Erythematous Syphilide, Miliary Syphilide, Papular Syphilide, with Precocious Ulcerative Lesions, and Papulo-Pustular Syphilide."

The work is to be published in fifteen monthly parts, each containing five chromo-lithographic plates, sold at \$2.00 a fasciculus, by Wm. Wood & Co., 56 & 58 La Fayette Place, New York.

THE SURGICAL DISEASES OF THE GENITO-URINARY ORGANS, INCLUDING SYPHILIS. By E. L. Keyes, A.M., M.D. A Revision of Van Buren and Keyes' Text-Book on the Same Subject. New York: D. Appleton & Co., 1888.

This is essentially a new volume, so much of it having been rewritten since it last appeared. The original treatise by Van Buren and Keyes has always been held in high esteem, and we do not doubt that the revisions made to place the subject abreast of the present state of our knowledge will give the volume higher rank than ever. We learn by the preface that the original volume was from the pen of Dr. Keyes except the four chapters on stone. These have been excluded from this edition, except one chapter, owing to the great revolution which Dr. Bigelow's operation had made in the treatment of stone.

The high-operation for stone is recommended as "suitable for all large stones, that is, those which have the diameters greater than one and a half inch, or it may be safer to make the limit even smaller in the future, for the mortality after lateral lithotomy increases rapidly with the size of the stone—not so in the high-operation."

The treatment of strictures is ably set forth, and although we miss some of the newer instruments among those figured, we find a great deal that is instructive upon this most difficult department of surgery. The mechanical skill exhibited in instruments devised for treating stricture, is the most remarkable of all the advances made in operative surgery, with the exception of those used by ophthalmologists, and we make this assertion with a full knowledge of the immense number of instruments devised for gynecological cases.

The addition of syphilis to the number of subjects treated makes the book complete, and it will probably stand many a year before it

will be necessary to revise it. The volume is well printed, has a good index, and is in every way admirably adapted as a favorite text-book or reference-book.

LECTURES ON DISEASES OF THE HEART. Delivered at the College of Physicians and Surgeons, New York City, by Alonzo Clark, M.D., LL.D. E. B. Treat, 771 Broadway, 1887.

Every reader knows the reputation of Dr. Alonzo Clark as a teacher, and not a few will be glad to read these lectures in their present form. Without wordy preliminaries, the author treats directly of heart-sounds, and his colloquial style is well adapted to a clear exposition of the many-times befogged subject. In their turn he treats of pericarditis, endocarditis, dilatation of the heart, fatty degeneration of the heart, rupture of the heart, fibrous degeneration of the heart, heart-clots and valvular disease, which is followed by its appropriate treatment. Deformities and functional diseases of the heart, and an account of the effects of certain drugs on the heart conclude the volume.

Everywhere do we observe revision up to recent dates, and the volume has freshness and clearness to recommend it, and many merits which will place it among the ablest.

DISEASES OF THE HEART AND CIRCULATION IN INFANCY AND ADOLESCENCE. By John M. Keating, M.D., and William A. Edwards, M.D., Philadelphia. P. Blakiston Son & Co., 1888. Pp. 215. Price \$1.50.

This is a collection of a series of able papers which appeared in the *Archives of Pediatrics* during 1887. The book is divided into ten chapters on the methods of study, the foetal circulation, congenital diseases of the heart, malformations and cyanosis; acute and chronic endocarditis and ulcerative endocarditis; acute and chronic pericarditis; the treatment of endo- and pericarditis, paracentesis pericardii, hydropericardium, and pneumopericardium; myocarditis, tumors, new growths and parasites; valvular disease, mitral, aortic, pulmonary and tricuspid; general diagnosis, prognosis and treatment of valvular disease; endocarditis, atheroma, aneurism; cardiac neuroses, angina pectoris, exophthalmic goitre; disease of the blood, pletæra, anæmia, chlorosis, pernicious anæmia, leukæmia, Hodgkins' disease, hæmophilia, thrombosis and embolism.

There are two photographs illustrating mitral regurgitation and mitral stenosis.

The book is produced in excellent style of the typographer's art.

ESSENTIALS OF CHEMISTRY AND TOXICOLOGY FOR THE USE OF STUDENTS OF MEDICINE. By R. A. Witthaus, A.M., M.D. Second Edition. New York: Wm. Wood & Co.

This is a little pocket manual for students, written in the form of question and answer, and must prove a valuable help to those who are preparing for examination. We know it would rejoice the heart of the examiner in chemistry of our State Board, if he could find one in ten who would answer the questions herein set forth. There is no room to doubt that little book is necessary.

CALCYANTHUS, "Sweet Shrub," "Carolina Allspice." Can any of our readers living in the mountain section give us any information as to the use of this plant as a remedy for chills or any other disease? It is spoken of (*Brooklyn Medical Journal*) as having been used by Confederate soldiers for that purpose. One species *Calycanthus floridus* grows in the mountain region abundantly, and is also domesticated in the east.

THE HUMAN BREATH A POISON.—The Paris correspondent of the *Medical Press and Circular* reports that, at the last meeting of the Académie des Sciences, Prof. Brown-Séquard referred to some experiments he had conducted with a view to determine what, if any, were the toxic effects of the human breath. In condensing the watery vapor coming from the human lungs, he obtained a poisonous liquid capable of producing almost immediate death. This poison is an alkaloid (organic) and not a microbe or series of microbes, as might have been imagined. He injected this liquid under the skin of a rabbit, and the effect was speedily mortal. The animal died without convulsions; the heart and large vessels were engorged with reddish blood, contrary to what is observed after ordinary death, when the quality of blood is moderate and of dark color. In conclusion, this eminent physiologist said that it was fully proved that respired air contained a volatile toxic principle far more dangerous than the carbonic acid, which was also one of its constituents, and that the human breath, as well as that of animals, contained a highly poisonous agent.—*Boston Med. and Surg. Jour.*

CORRESPONDENCE.

A CALL IN REGARD TO A STATE MICROSCOPICAL SOCIETY.

Messrs. Editors North Carolina Medical Journal :

Having been interested for a long time in microscopical matters, I have naturally kept up with the growth of this study and the pulse of professional opinion regarding it throughout the State. Within the last year I know of several young men who have begun to pay their devotion to this art, and of others who wished to do so, but were deterred by that instinctive magnifying of difficulties which ever attend unaided effort in a new field. It seems to me, then, that the time has fully come when the microscopists of the State should effect some permanent organization and thus foster and encourage the spirit of interest now being manifested in this most important branch of medical diagnosis.

The medical profession of the State, and, for that matter, of every State, constitute, as a rule, the rank and file of its scientists. It would therefore seem most proper that the annual congress of the physicians of the State should be the "meet" of any association organized for the development of this work. The few non-professional "tube-workers" in the State, most of them college professors, could not, and certainly would not, object to this. Besides, the pleasure of their presence, the friction with scientists not in exactly the same line of scientific study, would give a breadth of horizon to such work and an "out-of-harness" feeling to the medical members that could but add to the pleasure of the occasion. To the non-professional members we could return in kind, and they would moreover be rewarded by an insight into the organic life of a body of men whose lives of self-sacrifice they would ever after appreciate, even if they could not exemplify.

I know of no branch of medical study that would as well repay organization as this, nor any that, organized, could on such an occasion as a single annual meeting present so clearly and instructively the tangible result of a year's work in any chosen field.

This is one of the peculiar advantages and attractions of this art.

The physician cannot transport his cases, nor the surgeon even so much as his apparatus, but the microscopist can always bring his instruments and a case of slides.

No one who has never attended a microscopical soireé, such, for instance, as those of the New York Microscopical Society or the Medical Microscopical Society of the City of Brooklyn, can conceive of the pleasure, and, above all, instruction, to be derived from such entertainments. Often fifty or more microscopes upon the table, and each exhibiting some mount of selected interest. Another thing that would add value to these meetings would be the opportunity for the interchange of mounts, not only then, but afterwards through the mail.

All microscopists have, or should have, some especial branch of work or study. At the annual gathering we could each find out those who have a similar "penchant," and a continual interchange of slides by mailing-boxes would be the result. For it is seldom, indeed, that we find a pathological specimen of sufficient merit to be embedded and cut, that will not yield sections enough from the microtome to supply all friends and a few beside. But these are merely incidental matters.

Such an organization as the one proposed, conducted in the proper manner, would be of untold benefit to the younger members of the profession in the State—more so to these than to the veterans in the art. The annual exhibit of instruments and of work done, will incite the laggard to try it himself, and while few, indeed, acquire reputation in the precise technology of Bacteriology, who knows but North Carolina may yet produce her Koch, Pasteur, Friedlander and Sternberg. Be this as it may, there is no doubt a crying need for an organization of this kind in the State, and a section on this subject added to our annual list. Knowing that some one must take the initiative, I have addressed cards to all the microscopists, both medical and otherwise, that I know in the State, as well as to every physician that it seemed would be interested. Replies already received allow me to say that there will be an organization for the aforesaid purpose at the Fayetteville meeting of the State Medical Association in May.

Let all those who are in favor of such an organization so testify by their attendance at this meeting, and join with us in at least a nucleus organization around which a future society worthy of the Old North State may grow.

PAUL B. BARRINGER, M.D.

Davidson College, N. C., April 6, 1888.

AN APPEAL TO YOUNG MEMBERS OF THE MEDICAL PROFESSION TO JOIN THE STATE MEDICAL ASSOCIATION.

Messrs. Editors North Carolina Medical Journal:

As I have stood aloof for two years, by force of circumstances, I almost feel as if I owed the Medical Society an apology for not joining at an earlier day, and thus, by my presence and support, help to cement the union of our brotherhood. There is a power emanating from organization and association which every qualified practitioner must own has a tendency to influence the public mind, and prove to the world that, associated together, we are striving to elevate the standard of the profession, and at the same time, by combined thought and energy, "adopt such means as will best subserve the interests of suffering humanity and protect them against charlatans and quacks, whose sole purpose is to play upon public credulity and as medical sharks feed upon the hard earnings of good people.

Medical societies are therefore a necessity and are formed for the express purpose of mutual help and for the promotion of the science of medicine. Now, to secure this end, there must be unity of will and conjoint action and the coöperation must be under the guidance of Christian principles. In our collective capacity we should forget unfriendly individual relations and sit together at a common board and discuss measures for the health and comfort of our patients.

Our energies must be combined to further and propagate the truths of medicine, and this can't be done unless we work together in harmony—unless we establish a social and fraternal feeling—unless we place our hearts upon the sacrificial altar of friendship, and determine to stand by and protect our professional brother. Our collective personality should be such that supporters and opponents shall not be blind admirers only, but in admiration drawn to us as propagators of truth, as students of scientific medicine pure and simple, who belong to the progressive element, determined, with arm linked in brother's arm, to elevate the character of the profession to the high plane to which it is tending.

Since my connection with the profession I have been wonderfully at a loss to know why we, who have common interests, should not have perfect unity and combine to build up our State Society on

broad democratic principles, and lay a more firm and solid foundation on which every brother can stand united—standing in the beauty of its completeness, the pride of the profession, ever to rest on brotherly love as its base, never to be shaken. Then let us be true to our profession. Do we ever expose to the public the mistakes of our brother, or try to lift him higher! We should be more refined in our language when *dissecting* an absent brother. Why give cruel cuts, or from the generosity of temper stab him in the back, who has drunk at the same fountain of learning and subscribed to the same Cede of Ethics. If you are strong and your brother weak, stretch out to him a helping hand—point out kindly his errors to him, and he will “love to shelter himself under the example of a great man.” Little acts of courtesy knit the profession together, and when young members of the profession realize that State medical societies throw around its members the mantle of protection and see faith and devotion to a common cause practiced, then the Society will have more annual visitors, fraternal relations will be established, and with it an unbroken front in the attack against charlatanism, we will stand as one man.

This tendency of despotic power by some to grind down and drive to the wall young and modest members of the profession who, being already overburdened, are trying to “climb the rugged steps of learning,” is an unanswerable argument why every regular practitioner should join the Society, and individually and collectively use their influence to have the organization so perfected that every member will be under the fostering care of the Society, and as loyal disciples of Hippocrates expect and demand protection under the By-Laws as subscribed to.

To those of the profession who have not had experience and opportunity of studying disease in its various manifestations, our visit to the Society meeting will not only be pleasant, but profitable. Text-books do not furnish all the information required. Here we are supplied with just the kind of information most needed in private practice. Text-books furnish us with conclusions arrived at by scientific research, and elaborate experimentation has settled the relative value of remedial agents, but in the conversational meetings of societies we hear discussed the common diseases we meet with in every-day practice, and are advised in the niceties and little details of practice which fit and prepare us for our life-work. Medical

schools often overlook minor ailments, but when the young doctor has to rely on his own resources in practice, he will believe with Napoleon that "there are no little things," and learn that even headache (which is only a symptom) should merit the attention of the brightest talent of the age.

No young practitioner should neglect the opportunity of attending the Society and learning of physicians of ripe experience practical suggestions. There is wisdom sometimes in getting out of old ruts, lest we become case-readers, or run into routine practice.

Let us, then, unite in our efforts, and make our State Society what Albert H. Smith was pleased to call the Philadelphia County Medical Society—"the clinical meeting, the true post-graduate course of medical instruction." At these meetings we have the views of competent observers, given from a common-sense standpoint, and we can for ourselves sift out medical truths from the mass of facts reported and carry them home with us as acquisitions to our medical knowledge.

At the next meeting of the Society some of the new therapeutic agents will be considered, and to those of us who have not had time to study the physiological and pathological action of the remedies recently added to the *materia medica* will doubtless get in a few days what it would cost much study to acquire.

The new antithermic medicines, of which antipyrin is the most important, being the least dangerous, and antifebrin, which is much cheaper and equally certain in results, will be ably presented from the light of experience, and the near observation of the best thinkers of our own native State, and whether or not we participate in the discussion, we will certainly learn much that will lead us into useful rules of practice. If hydro-therapeutic measures are considered at the same time, there will certainly be a rich feast in store for us.

Let us all attend and try and infuse into the meeting new life, and with one heart and hand "spread the cement of brotherly love and affection," and returning bring back only pleasant memories of a joyous meeting.

J. A. FAISON, M.D., Mt. Olive, N. C.

CURRENT LITERATURE.

HOW MR. LAWSON TAIT WORKS.

TWO ABDOMINAL SECTIONS.

Birmingham, October 1.

Sir:—I send you a report of the following interesting cases, which are historical, and illustrate the character of the work that Mr. Tait is doing :

On September 21st Mr. Lawson Tait was summoned to Italy to operate on the wife of a distinguished American physician, a resident of Rome.

He asked me if I would be "prepared to accompany him in an hour?" After a rapid journey through the most beautiful portion of Switzerland, including the St. Gothard Pass, we arrived at Lugano, a small Italian town nestling among the mountains at the southern extremity of Lake Lugano, a small lake forming part of the boundary line between Switzerland and Italy, and exceeding in beauty the famous Lake Como.

The patient, a most estimable lady, thirty-five years of age, distinguished for her beauty and culture, had been a sufferer for many years. Her history is given in the following extracts from letters, written by her husband, to Mr. Tait :

LETTER I.

Hotel du Parc, Lugano, August 3, 1887.

Mr. Tait:—In the early part of last January she was seized with severe hysterio-epileptic convulsions, which continued almost daily for six weeks, when they ceased. She remained very weak, and it was not until June that I was able to move as far as here. For one month she seemed to gain, and was able to move round a little, and preparations were made to come on. The day before she was to start she was again taken down worse than ever, the convulsions lasting from three to four hours and followed by wild delirium, and for days no sleep. This continued for eight days; then she began to improve, and I was hopeful of being able to get her on by easy

stages; but, alas! ten days since she was worse than ever; the mania that followed was of a suicidal character.

I am satisfied nothing will be of service short of removal of the uterine appendages, as those on the right side have been diseased for the last eleven years. At that time she had an abortion, followed by salpingitis, which confined her to her bed for three months. Since then she has had eight abortions at about the second month.

During this attack there has been great tumefaction over the right ovary and tube, with fever and uterine pain. Four days since a considerable quantity of of fetid, greenish-yellow pus escaped from the uterus, in my opinion from the tube; since then she has been much relieved, and there is less tumefaction. I cannot operate on my own wife, and I prefer that you should do the operation; hence I write to ask you when I had better bring her, and whether you prefer to have her stay at your hospital, or where?

P. S.—Two years since she had a similar attack, which lasted four months.

LETTER II.

I am satisfied that my poor wife would not have the strength to travel to London, even by easy stages, and that it will be necessary for you to come here. At the request of the family I have consented to a consultation with Professor Porro, for Tuesday, who undoubtedly will confirm my diagnosis, and even if he does not, my opinion will be the same, and I shall insist on the case being placed in your hands. If he does, my hands will be strengthened, and they will have no chance to charge me with having an operation performed unnecessarily. God knows if there ever was a case calling for interference this is one. I will write or telegraph you immediately after seeing Porro, and will have him write his diagnosis and advice over his own signature.

LETTER III.

August 17, 1883.

Porro commenced his operation yesterday at eleven, and finished by abandoning the operation at a quarter past twelve. He made an incision three and one-quarter inches long; he says both ovaries and tubes were so firmly adherent that it was impossible to separate them from the mass of organized tissue in which they were embedded, the slighter adhesions he broke up, and then crushed the base

of the ovaries with strong forceps, with the hope, he says, of partly destroying their function. He wished me to feel the attachments, but I declined, as I preferred to leave all responsibility with him. She suffers dreadfully. I give her as much morphia subcutaneously as I dare, but there seems no possibility of controlling it entirely. There is continued nausea and vomiting. Pulse very weak and compressible, 80; temperature, 99°.

REPLY TO NO. III.

7 Crescent, Birmingham, August 20, 1887.

Dear Dr. —:—I am greatly distressed by the information conveyed in your letter of this morning, the more so as it is exactly what I feared would take place. The opprobrium of this particular kind of work will in future be the incompleting operations. My experience, now extending over a long series of years, satisfies me that there is no case in which adhesions of the uterine appendages are such that it is impossible to remove them by skilled and experienced fingers. I grow more and more satisfied that nobody ought to meddle with these cases except those who have, or are likely to have, an extended experience with them. It is a great pity that Professor Porro left the operation unfinished. If your wife survives it, let her rest for two or three weeks, and either let me go over to Lugano and operate, or bring her here. I will undertake that the operation shall be finished.

Yours very truly,

LAWSON TAIT.

LETTER IV.

August 30, 1887.

The principal pain now is from the cystitis, which is very distressing. I am having the bladder washed out with solution of boric acid, and giving her lithia water. I shall run over to London the first week in September, and shall come down to Birmingham to confer with you, when I can give you more particulars than by note.

I notice in the *Gynecological Journal* for August your report of the case first operated on by Dr. Joseph Williams, and afterward successfully by yourself, and showed it to my wife in order to encourage her.

Mr. Tait examined the patient and expressed himself as much relieved, as the operation would be less serious than he had anticipated, and to me he expressed the opinion that he would have the offending organs "out in less than three minutes." The operation was appointed for the following day at eleven a. m. Dr. Porro was telegraphed the time of the operation, and requested to be present. A reply was received stating that he was out of town, and that the notice would be forwarded to him.

On the morning of September 24th, after the administration of an anesthetic by the local attending physician, Mr. Tait performed the following operation :

The abdominal cavity was opened the lower third of the old cicatrix, two fingers passed within, and with marvellous dexterity the appendages were separated from their adhesions at the bottom of Douglas' cul-de-sac, brought up within the abdominal wound and tied off. The appendages of the right side were treated in the same way, a small drainage-tube inserted, and the abdominal wound closed with silk sutures, the whole operation being completed inside of five minutes. The husband, who stood at Mr. Tait's left, expressed himself as amazed and delighted beyond measure.

The patient made an easy recovery, the temperature remained almost normal, and at the time of our departure, three days after the operation, the friends stated that she was in better health and spirits than she had been for years.

The specimens showed no signs of the crushing to which they had previously been subjected, but presented much the same appearance as hundreds of other specimens which Mr. Tait had removed. The fimbriated extremities of the tubes were agglutinated to the ovaries, and both covered with bands of newly-formed fibrous tissue, showing the characteristics of an old salpingitis attended with repeated attacks of pelvic peritonitis.

The remainder of the day we spent fishing on the lake, within easy call, should any necessity require. The following two days were occupied in an excursion over Lakes Lugano and Como, as far as Milan, and included a visit to Dr. Porro, and other prominent points of interest in Milan.

The Ospitale Maggiore, at Milan, is a large, rectangular structure of brick, with nine open courts in the centre. It is antiquated in appearance, as most of the building was constructed in the fifteenth

century. Here Dr. Porro has at his disposal several hundred beds, mostly devoted to obstetrical cases. On our arrival Dr. Porro had already made his visit to the wards, but he kindly showed us around, pointing out many striking and interesting cases. Dr. Porro stated that he performed a great many abdominal sections during the course of the year, but I am unable to give you any information as regards the number or the results.

The odor of iodoform and carbolic acid pervaded all the wards, and it was stated that thorough antiseptic precautions were observed in all classes of cases.

Judging from the showing of some of the temperature charts, all of the cases do not pursue a perfectly aseptic course.

The news rapidly spread through Lugano that "*Il primo professore di tutto il mondo*" was in the country, and Mr. Tait was requested to operate upon a case of multiple myoma of the uterus. The patient had been a great sufferer for several years, and was much reduced by continual uterine hemorrhages.

She had consulted a distinguished surgeon of the country, who had refused to operate, and had expressed the opinion that if an operation were attempted the patient would die on the table.

The patient resided in an old stone villa of the thirteenth century, situated in the suburbs of the town. All the floors were of stone, and the room selected for the operation had but one window, not more than two feet by three in size.

After the patient was ætherized Mr. Tait made an incision five inches in length; this was afterward somewhat enlarged. Inserting his corkscrew, he rapidly delivered through the abdominal opening the tumor, consisting of three nodular masses, each the size of a child's head, together with a cystic ovary, the seat of a hæmatoma. The base of the tumor was encircled with a temporary clamp and enucleated from its pedicle.

A Koeberle's *serre-nœud* was applied and the pedicle fixed in the lower angle of the abdominal wound, which was closed with silk sutures. The stump was treated with perchloride of iron, and a dressing applied. At the close of the operation, which was completed in fifteen minutes, the patient's pulse was full and strong, and beating at the rate of 80 per minute. The patient, although unfavorably situated for such a serious operation, made a very happy recovery. Two hours

after the above operation we left Lugano for Birmingham, arriving here just one week from the day of our departure.

I cannot close this hasty sketch without expressing my belief that Mr. Tait is one of the jolliest travelling companions in all England his information is universal, and what he says is always interesting.

C. N. DIXON JONES, M.D., Brooklyn, N. Y.

—*Medical Record.*

OBSERVATIONS ON PROGNOSIS.

Dr. P. H. Pye-Smith concludes a paper (*Guy's Hospt., Rep. ; Med. Recorder*) as follows :

"Epidemic diseases are most fatal when first introduced. Acute diseases, following upon chronic, are the most dangerous. A degree of pyæmia, which is of slight importance in a child, is grave in an adult, and imminently perilous in an old man. Typhus fever is most dangerous to persons who have passed their sixtieth or seventieth year ; less to infants and those between thirty and fifty-five ; and least dangerous to children about five and to young adults. Small-pox in these particulars closely resembles typhus. Whooping-cough is dangerous during infancy, and benign after five years of age. Scarlet fever seldom takes on a malignant form when it attacks adults. Acute lobar pneumonia has usually a favorable issue in youth, and is usually fatal in advanced years. In young adults pneumonia is rarely fatal unless the patient has disease of the kidneys or of the heart, or is of intemperate habits. Pneumonia is also a dangerous complication of fevers or acute rheumatism. Acute lobar pneumonia, when not fatal, leaves the lung uninjured after recovery, and the patient in good health. It is seldom or never followed by phthisis, even when it attacks the apex. Primary acute pleurisy is not fatal, unless it is accompanied by pericarditis. Pleurisy, if under treatment it ends in death, is secondary to tubercle or to cancer, or to diseases of the kidneys. Œdema of the larynx is very seldom dangerous ; œdema of the lungs is usually so. Acute bronchitis is a frequent cause of death in young children and old people. Fatal bronchitis, in persons between ten and sixty years of age, is either capillary or secondary to tubercle. Phthisis is most pernicious when it is hereditary. Consumptive patients, who lose flesh and color and appetite, with but little signs of disease in the lungs, are

in a worse case than those who have marked local symptoms, but whose appetite and nutrition are good. Hæmoptysis, even when copious, is not always of ill omen. It is rare for hæmorrhage from either the lungs or the stomach to be immediately fatal, except it proceed from an aneurysm. Chronic valvular disease of the heart, when it complicates phthisis, does not aggravate the latter—rather it checks its progress. Sudden death is more frequent from aortic than from mitral lesions; in regurgitant than in obstructive disease of the aortic valves, and in stenosis than in dilatation of the mitral orifice. Apoplexy, when ingravescens, is commonly fatal. In apoplectic attacks the ultimate prognosis depends chiefly upon the degree and continuance of unconsciousness; the immediate prognosis upon the degree in which respiration is affected. Chronic diseases of the spinal cord are more likely to end favorably in women than in men. Chorea is only fatal when the patient cannot sleep. Malignant tumors are more rapidly fatal in the young than in the old. Cancers in the aged are sometimes exceedingly slow in their progress, and may even in rare cases atrophy. Stone in the kidney may frequently be cured without operation. The opposite is true of stone in the bladder. Diabetes is rapidly fatal when it occurs in young men, more curable in middle life, and of little danger in later years. Diarrhœa is dangerous only in infants and in persons above sixty years of age.—*N. Y. Medical Abstract.*

DR. JONATHAN HUTCHINSON ON LUPUS.

Dr. Jonathan Hutchinson, the eminent London surgeon and pathologist, delivered the first of the Harveian lectures before the Harveian Society in December, taking for his theme the subject of lupus. In his brief discussion of the subject Dr. Hutchinson rejects from his nomenclature the numerous adjectives, such as *exedens*, *non-exedens*, *exulcerous*, *hypertrophious*, *serpigenosus*, *exfoliatus*, and the like, and speaks simply of inflamed and non-inflamed lupus, since all the epithets alluded to generally refer to 'peculiarities produced by more or less active inflammation, and have also been used by different authors with very different meanings. To the nomenclature, however, he adds a number of new terms, formed by compounding with the word *lupus* the names of other forms of diseases of the skin which

occur concurrent with it, and modify its form and appearance. Thus, when lupus is modified by eczema, he would call it eczema-lupus with acne, acne-lupus, and so with the other forms of disease capable of modifying it.

The lecturer insists that a pathognomonic though not invariable feature of lupus is the presence of a new material, or growth, which is of a brownish-yellow tint, semi-translucent, and aptly compared to apple jelly. The recognition of this apple-jelly growth, in however small a quantity, he thinks denotes the disease conclusively as lupus, as nothing like it is ever seen in any other form of disease. So far from claiming to be the author of the discovery of the bacillus tuberculosis as the cause of lupus, Dr. Hutchinson distinctly denies that such is the case. "For those," he says, "who hold with the greatest firmness the modern doctrine that a bacillus is the one and only cause of true tuberculosis, yet admit that peculiarities in the state of health of the recipient are of very great importance in favoring the development of the parasite, for them tuberculosis is a disease from without, and can never be self-produced; but still, only those of certain idiosyncrasy or diathesis are capable of receiving the contagion. We have then two things, contagion and proclivity. It follows, I think, that it is quite possible that the state of the system which constitutes proclivity may in itself, and without tuberculous infection, originate some form of disease." Mr. Hutchinson further explicitly states that he regards lupus a form of inflammation modified by the scrofulous diathesis, but not caused by the bacillus tuberculosis, declaring that "there are, further, no facts whatever which would support a belief that lupus ever takes its origin from contagion."—*American Practitioner and News*.

THE LIVER THE EXCRETORY ORGAN FOR IRON.

The way in which iron introduced into the body is excreted being somewhat obscure, Dr. Zaléski, of Dorpat, has endeavored to clear up our knowledge of the subject by some very carefully planned experiments. He first took two rabbits of the same litter, as nearly as possible of the same color and weight, and reared them under

similar conditions, taking care that they had access to no food or drink containing any iron. When they were ten weeks old they were kept without food for four days, being allowed water only. Into the jugular vein of one of them was then introduced 3 cubic centimetres (50 gtt.) of a solution of sodio-tartrate of iron, containing .0096 gramme (about 1-10 grain) of metallic iron. No symptoms of acute poisoning occurred during three hours. At the end of that time the carotid artery was opened, and as much blood as possible removed. The whole vascular system was then thoroughly washed out by means of a special apparatus which is used for this purpose in the Strassburg Pharmacological Institute. The liquid employed was a warm weak solution of sugar, which was introduced into the aorta and allowed to run out from the portal end. This washing out was continued till the red tint of the muscles and other organs had disappeared so completely that the spectroscope detected no hæmoglobin lines. The other rabbit was also deprived of blood in precisely the same way. The organs of the two animals were then examined chemically, and the iron contained in them accurately estimated by the volumetric method. The result showed that the only organ in which the percentage of iron was markedly increased in the animal into whose system the sodio-tartrate had been introduced was the liver, the dry substance of the organ containing .0998 and .1723 per cent. of iron in the two animals respectively. A similar research was subsequently carried out in the case of two kittens. Here the livers contained respectively .0431 and .0895 per cent of iron, most of the other organs showing more iron in the animal into which none had been introduced than in the one in which the sodio-tartrate had been injected. The most remarkable instance of this was the muscular tissue, which, in the kitten that had had no iron, showed a percentage of .0206, and in the one which had had iron only .0073. Of this curious fact Dr. Zalêski does not see his way to offer any explanation, and it certainly appears somewhat paradoxical. In both the rabbits and kittens it was plainly demonstrated that the walls of the stomach and intestines contained no more iron in the animals which had been subjected to the intravenous injection than in the others. The result of the research would appear to suggest that the liver has some claims to be considered the excreting organ for iron.—*Lancet*.

STATISTICS OF ACUTE ARTICULAR RHEUMATISM.

In the Report of the Collective Investigation Committee of the British Medical Association we find the following statistics concerning rheumatism :

Death rate in total abstainers.....	5.36
“ “ temperate persons.....	3.74
“ “ intemperate “	8.82
Per cent. of heart complications in total abstainers.....	48.99
“ “ “ temperate.....	45.03
“ “ “ intemperate	46.88

The greatest prevalence of the disease was shown to occur in high, dry, exposed localities; next to this in low damp and confined places.

Tonsillitis occurred as an antecedent in 24.12 per cent.; scarlet fever in 13.43 per cent.; chorea in less than 2 per cent.

The influence of treatment upon the average duration of the disease was as follows :

Salicylates.....	19.03 days.
Salicylic acid.....	10.7 “
Salicin	23.92 “
Alkalies.....	36.30 “
Alkalies, followed by salicylates.....	22.22 “
Salicylates and alkalies combined.....	34.92 “
Salicylates and then alkalies.....	30.64 “
Salicin an alkalies.....	24. “
Salicylates and potas. iod.....	46. “
“ “ iron	27.7 “
“ “ tonics.....	18.68 “
Alkalies and opium.....	18.75 “
Salicylates and then iron and quinine.....	20.23 “
Salicylates and opium.....	30.3 “
“ “ blisters.....	15.83 “
Alkalies and then quinine.....	35. “
Salicylates and quinine.....	31.6 “

The fever disappeared first from the use of salicylates and blisters, the average being 6.14 days. Next come :

Salicylates and tonics	-	-	-	-	-	-	8.	days.
“ alone	-	-	-	-	-	-	8.65	“
Salicin	-	-	-	-	-	-	9.28	“
Salicylates and opium	-	-	-	-	-	-	9.9	“
“ iron and quinine	-	-	-	-	-	-	10.	“
“ and quinine	-	-	-	-	-	-	10.5	“
Alkalies and quinine	-	-	-	-	-	-	10.75	“
Salicylates followed by alkalies	-	-	-	-	-	-	10.78	“

Salicylates and potas. iod. bringing up the list with an average of 17.14 days.

The speediest disappearance of pain ensued from the use of salicylates and opium—8.45 days; the salicylate group follow, in 10 + days; and the salicylates and potas. iod. come last, with 24.16.—*British Medical Journal*.

[This, however, is in accordance with our own experience in the use of iodide of potassium. This drug is of little utility in acute rheumatism, but of the greatest value in cases which have been prolonged until they threaten to become chronic. At this time a rapid cure follows the administration of this drug, which may have been previously used in the same case without benefit. Hence the long duration of cases treated by it in the above table may be explained, as well as the favor in which it is held by many who have succeeded with it when “everything else had failed.”]—*Medical Times*.

ANTIPYRINE AS A HÆMOSTATIC.

This drug, I believe, was first introduced as anti-pyretic, but it seems to be a more valuable agent in other respects, at least, it has given me better results. In fevers I regard it unreliable, because even in moderate doses, it depresses the patient to such a degree of prostration that stimulants must necessarily be promptly given. Dr. O. L. Williams, of Chapel Hill, Texas, in a paper read before the State Medical Association, calls attention to its value in sick headache, and I can also testify to its good effects in that troublesome disease, having used it (uncombined with other drugs) in 10–15

grain doses before I read Dr. Williams' interesting article. Now, as a local hæmostatic I can only briefly refer to two cases that came under my care recently. Mrs. S. is the victim of an "old sore leg" of some three years standing, the sore situated on anterior surface, lower third of tibia. Some time ago, while out in the dark drawing water, she accidentally struck the sore leg against the spout of a stove kettle, which caused a frightful hemorrhage, filling her shoe full of blood in a very short time. I was sent for in haste, and when I arrived found her nearly exhausted. I applied a 4 per cent. solution of antipyrine, and had the satisfaction of seeing the bleeding quickly checked. I then applied a light compress and bandage and extremities on pillows in bed. No more hemorrhage has since occurred.

A few days later I operated on a boy in his seventh year for phimosis, removing nearly one inch of the prepuce; the hemorrhage, of course, was profuse. Before removing the clamp forceps I applied a 4 per cent. solution of antipyrine, also immediately after removing them. All bleeding was promptly arrested and the mucous membrane and foreskin were neatly brought together with numerous stitches without the least annoyance from further hemorrhage. A simple water dressing completed the operation, and on redressing, the following day, I do not think I ever saw a cleaner, nicer wound.

Dr. Cosati, in *Independencia Medica*, concludes as follows :

1. Antipyrine is a powerful hæmostatic.
2. It is superior to perchloride of iron, because it leaves the wound perfectly clean.
3. It is even superior to ergotine, because it has no toxic effects if the doses are not too enormous.
4. In most cases it is preferable on account of its double antipyretic and antiseptic action.
5. The hæmostatic action takes place in a very short time.

My little experience with the drug thus used induces me to fully concur with this writer, and I would be glad to hear from others who may have used it in the same way, as it is comparatively a new drug, and I am not familiar with its origin and general use. As above stated, it has not given satisfaction in fevers in my hands, and I purpose at some future time to write up my experience with it in typhoid and other varieties of fevers.—*W. M. Powell, M.D., in Daniel's Texas Medical Journal.*

BE CAREFUL IN EXAMINING PERIPHERAL VESSELS IN DISEASES OF THE HEART AND AORTA.

A case which I saw a few days ago illustrates the value of a careful examination of the peripheral vessels in diseases of the heart and aorta. A man aged 42, well-built, a glass manufacturer, had been troubled for three months with shortness of breath on exertion and feelings of distress about the heart. He had lived carefully, but had used tobacco to excess. Had not had syphilis. Was temperate in his habits. He had frequently lifted very heavy weights in helping the men in the factory, but there was no definite history of strain. The patient was a bright, healthy-looking man. Pulse 88, collapsing. Radials, brachials and carotids pulsated visibly. Apex beat in fifth space below and just outside nipple line. No thrill. Aorta not palpable in supra-sternal notch. Vertical and transverse dullness increased. Percussion clear upon, and on either side of, manubrium sterni. At apex there was a loud, rough, systolic murmur heard as far as anterior axillary line, but the maximum intensity was over the body of the heart. At the aortic cartilage and on manubrium there was also a loud systolic bruit; the second sound was well heard, not specially accentuated, and down the sternum I could just detect a soft diastolic murmur. In the carotids these murmurs were very clearly to be heard. Exercise did not materially modify the condition. I thought that he probably had sclerosis of the aortic valves, with dilatation and hypertrophy of the left ventricle, mitral insufficiency, and attributed the dyspnoea to failing compensation. I usually examine the abdominal aorta and femorals in aortic insufficiency, and Dr. Wise called my attention to the fact that he had not been able to obtain any pulsation in the vessels of the lower extremities. The most careful palpation failed to reveal any pulse in iliac, femoral or popliteal vessels, nor could I feel distinctly the abdominal aorta. This made me return to the thoracic aorta, but on manubrium, no pulsation in sternal notch and no accentuation of second sound. Posteriorly, however, a very different state of things was evident. The left interscapular space was more prominent than the right, and at the spine of the scapula pulsation was visible. Dullness in an area 3 by 2 inches; no thrill; impulse heaving. Auscultation gave a loud

systolic murmur of maximum intensity over the pulsating region, but also heard up and down the spine. Undoubtedly we had here an aneurism projecting from the upper part of the thoracic aorta, or more probably just at the termination of the arch, and it must be of large size to appear externally in a region so thickly overlaid with muscles. The sac is of sufficient extent to absorb the entire expansile force transmitted from the left ventricle, so that the stream below it is no longer intermittent but continuous; hence the absence of pulse in the femoral and popliteal arteries.—*Canada Medical and Surgical Journal*.

ANTIFEBRIN IN FEVERISH CONDITIONS IN CHILDHOOD.

This paper, by J. Wedervitz (*Wiener med. Wochenschr.*, Nos. 17, 18, 1887), records fifty-three cases, including scarlatina, measles, simple and with pneumonia, erysipelas, croupous pneumonia, etc., which were treated with antifebrin. Two noticeable points, not previously observed, were brought out: First, that the drug was seen within from ten to twenty minutes after it was taken, and the fall of temperature was very rapid till it reached its lowest point, when it began slowly to rise again, the rapidity of the fall depending more on the individual and the disease than on the dose given. The second point was the surprisingly favorable influence of the antifebrin on the general condition of the children. In almost every case restlessness was overcome, and sleep followed within a quarter of an hour after the dose was taken. Of the various diseases under treatment scarlet fever and erysipelas were the least affected by the drug; measles and pneumonia responded more certainly, and tubercular affections complicated with measles most quickly of all. The pulse was not affected to the same extent as the temperature. The dose given was about two grains to children three or four years old, and four to five grains to older children. The smaller doses, as a rule, were sufficient in the badly nourished, who as a rule react more energetically to the drug. As much as thirty grains was occasionally administered daily. Antifebrin had no noteworthy effect on the general course of the disease.—*Edinburgh Medical Journal*.

BILE AND FAT DIGESTION.

M. Dastre, in a report to the Society of Biology, at the session of December 17, 1887, referred to the fact that he had proven that the presence of bile in the stomach during different periods of digestion did not take from the gastric juice its digestive power, and that consequently it could not be the cause of vomitings or of severe gastric troubles. To-day, thanks to the success of two operations for intestinal cholestylo-intestinal fistula, he thought himself in a position to conclude that the bile contributed as well as the pancreatic juice to the digestion of the fats, an opinion which is counter to that expressed by Claude Bernard. In fact, the two animals being in good condition four months after the establishment of the fistula, they had been given a meal of fat and milk, and then slaughtered during full digestion. The examination showed with absolute clearness that the lacteals were transparent between the stomach and fistula, and on the contrary entirely white and milky below the fistula, that is to say, where the bile had been able to get. Consequently, if observation on the rabbit shows us that the bile alone is unable to emulsify the fats, the preceding experience shows us that the pancreatic juice takes part in the digestion of fats.—*American Practitioner and News*.

PAIN AND ITS CONSEQUENCE.

If there be one set of women more liable than another to become victims of morphia or chloral, it is the wives of physicians. Every winter I see four or five, and always it is true that the habit has arisen out of the effort of the husband to attend medically on his wife. Physicians make good husbands, and this is in part due to the fact that their knowledge of the difficulties of feminine life causes them to be more thoughtfully tender and more charitable as concerns the effects upon women of certain inevitable conditions as to which the layman is ignorant or indifferent. But the very fullness of the husband's appreciation of a woman's drawbacks and little moral ailments, the outcome of her womanhood, becomes dangerous when he ventures to be her medical caretaker. What he coolly decides in another case he cannot in hers. How can he see her suffer and not give her of the abundance of relief in his hands? She is quick to know and to profit by this, and so the worst comes of it.—*S. Weir Mitchell, M.D., in Doctor and Patient*.

NOTES.

ACETIC ACID AND ERGOT.—Dr. J. S. Mahomed (*British Medical Journal*, April 7,) finds that the acetic tincture of ergot is very effectual as an eccholic. This is not a new suggestion, but it requires further study.

COCAINE IN TRACHEOTOMY.—Dr. Lennox Browne (*Brit. Medical Journal*) says that since the introduction of cocaine hydrochlorate, he has used it by injecting five minims of a 10 per cent. solution on each side of the intended incision and ten minutes before the incision. It has the advantage of being less bloody than the same operation under chloroform or ether. This must be good practice, and it comes from a master in the art of surgery of the throat.

DEATH OF DR. CORNELIUS R. AGNEW.—The whole country will hear with sorrow of the death of Dr. Agnew, and especially to the medical profession of New York is his death a loss of great magnitude. As a skilled specialist in diseases of the eye and ear he stood unexcelled; as a sanitarian his views were broad and his knowledge superior; as a citizen he was foremost in all good works for the mitigation of sorrow and distress; as a Christian his life has shone in the city of New York for a generation.

The cities of Wilmington and New Berne remember with gratitude the zeal and generosity with which he undertook the sanitation of these conquered towns, when after four long years they had been soldier's camps and pestilence was stalking abroad.

Numerous friends in the South will also remember with gratitude the Christian courtesy which he has dispensed to them, when their bodily distresses were great and their purses very light. How that he rendered cheerful service to those in need, forgetting the past, and bidding all to look with courage to the future.

Dr. Agnew was one of the early founders of the American Public Health Association, an association whose influence in shaping the course of public health work in the United States cannot be over-estimated.

We have no data to give of the life-work of this great and good physician, but desire to record this mournful tribute of our love for one whose life is crowned with honor.

THE MISSISSIPPI-VALLEY MEDICAL MONTHLY has changed its name to the *Memphis Medical Monthly*. This Journal has every appearance of prosperity, and it is doing good service in enlightening the profession.

SPONTANEOUS VACCINE DISEASE.—After a successful ovariectomy by Homans, of Boston, “two well formed vaccination vesicles appeared spontaneously in the cicatrices of two successful vaccinations done eight years before.” Dr. Henry A. Martin, famous for cultivation of bovine virus, confirmed the diagnosis.—*Southern California Practitioner*.

HONORS TO PROF. D. HAYES AGNEW.—We note in the Philadelphia and other Northern medical journals the honors done to Prof. Agnew, taking the form of a banquet. There seems to be no other way of expressing good-will to great men but in a banquet, and if that be so, none but the best should be prepared for the man whose life, both private and public, has been a blessing to his city and the whole country.

HYPODERMIC or other syringes, when clogged so that a fine wire cannot be forced through them may be cleaned by holding over a spirit-flame for a moment, and the foreign matter will be quickly expelled or destroyed, so that liquids may be used immediately. When a wire has rusted in a needle, dip the point into oil, then hold it over a flame and it can be removed. It is well to draw oil through the point, then heat it and rust will be removed from the interior; afterward wash with alcohol, and it is ready for use.—*Dental Review*—*Memphis Medical Monthly*.

GALL-STONES OR SOAP?—There seems to be some confusion of ideas on the subject of the nature of masses passed after the administration of olive oil for hepatic colic. A careful examination usually reveals pale, greenish masses which may be soap, but there are also whitish and dull-brown bodies, varying in size from a pea to an acorn. These bodies, if separated on a piece of blotting-paper to rid them of the oil, reveal their nature by giving the reaction for cholesterine. If a few drops of ammonia be added to them and then a drop or two of nitric acid, a red reaction indicates cholesterine, of which gall-stones are largely composed.

HERNIA is not caused by a long mesentery, for in monkeys the mesentery is always long, yet hernia is extremely rare.—*Southern California Practitioner*.

DR. FRANCIS M. ROUNTREE died at his residence, near Kinston, a few weeks ago. We have been waiting for a tribute to his memory from some neighboring friend, but it has not come. We have known Dr. Rountree for many years, and bear record to his devotion to his profession, his warm and genial disposition, and his loyalty to the letter and the spirit of the Code of the Medical Society of North Carolina. He has always been a warm friend of the JOURNAL, and as a member of the Senate in the Legislature of 1885, he worked diligently and effectually in enacting the law under which our State Board of Health and Board of Medical Examiners are now constituted.

ANTIFEBRIN.—As an antipyretic, the reports of antifebrin are favorable. The objections, or rather the fear of shock, has measurably been overcome. The chilly sensations of the patient, and the cyanotic appearance, are denied by many of the hospital internes, where the preparation has been used extensively, and as much as 15-grain doses have been administered. In our own experience 10-grain doses, repeated in three hours, has produced a very well marked chill, rigidity of the muscles and cyanotic appearance—so much so, in fact, that in four instances it was on the verge of creating a panic in the household. Then, for a time, we gave it with considerable reluctance. In all of the cases, however, the end was good and the disease conquered more easily. Yet these disagreeable symptoms seemed to create a fear with the doctor and patient, and it was undoubtedly an objectionable feature, to say nothing more. To be sure, these symptoms were overcome by the application of dry heat and alcoholic stimulants and friction. But we did not want them to occur. The further use of the antifebrin demonstrates that if alcoholic stimulants are given before preparation, and the antifebrin in smaller doses, in a measure, at least, the untoward symptoms may be averted. Not alone as an antipyretic is antifebrin giving good results, but in rheumatism, sciatica, and especially neuralgia, and what is generally known as rheumatic headache. In my own personal experience I find that in supraorbital neuralgia it has no equal.—*Dr. Earp, in Indiana Med. Jour*

DR. NICHOLAS SENN has been appointed Professor of the Principles of Surgery and Surgical Pathology in the Rush Medical College.—*Medical Record*.

DR. J. BERRIEN LINDSLEY, of Nashville, Tenn., the distinguished sanitarian and scholar, is busy bringing out the second volume of "Military Annals of Tennessee," a work which is a great honor to his adopted State. It has no equal as a record of what Tennessee did in the great struggle, and when we learn that Dr. Lindsley was a Northern man and a unionist during the war (*Memphis Medical Monthly*), we cannot help admiring his candor and ardor as a historian of Southern soldiers. The steel engravings alone in this work cost more, probably, than all the money our State has spent in perpetuating the deeds of her sons.

TANNIN WOOL.—Benjamin Ward Richardson writes in the *Asclepiad*, No. 17, 1888, that in treating ozæna and other diseases attended with fetid odors, tannin wool turns out to be of great practical service. I had thought that the manufacture of this preparation had become a general fact; but as many medical friends have at various times written for the method, it may be of service to give the details here. To make tannin wool, add to distilled water heated to 140° F. pure tannin up to saturation, stirring carefully all the time. When the water is saturated, add to it pure cotton wool, bit by bit, until all the solution is taken up by the wool. Lastly, put the saturated wool in an evaporating dish, and dry it slowly until it is quite dry. It is then ready for use, but must always be kept in a closed bottle. It must be neatly teased out before being used; but it is well to keep it in the rough state. A good stock of tannin wool is at all times a useful thing to keep at hand. It is a ready styptic and possesses good antiseptic properties. It can easily be iodized by making an ethereal solution of iodine, saturating a portion of the cotton with the solution, and allowing the ether to evaporate. One grain of iodine to an ounce of the cotton is sufficient to make a very good specimen; and an iodized cotton made in this proportion is one of the best applications for bedsores that can be adopted. It rarely irritates, it removes odor, and often favors the healing of the sore.—*Medical News*.

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Of physiological remedies which have been of late carefully studied, and widely employed by physicians, among the first in importance and utility are the digestive ferments. Inasmuch as gastric digestion is regarded as the most often at fault, pepsin is the digestive ferment most largely used.

That the remedy is an efficient one is attested by thousands of those who have obtained from it the relief and aid they sought, other thousands however condemn it as worthless on the best possible ground; that of their own experience. Why is this?

One cause for this discrepancy in testimony has been stated by physicians who have given special study to this subject to be the too indiscriminate administration of pepsin in all cases of indigestion and the failure to differentiate impaired secretion of the gastric ferment from other causes of indigestion, intestinal or hygienic. To clear away this bar to the successful employment of pepsin is the province of medical teachers.

Perhaps a more important cause of failure with pepsin has been the lack of definite knowledge, both on the part of physicians and manufacturers, of the nature of this ferment and the conditions indispensable to its proper preparation and action. This cause of failure it is the part of the pharmacist to do away with.

Our experimental department has been engaged for a long time in the careful investigation of the digestive ferments and while we can not here present in full the results arrived at we may briefly state the following demonstrated facts.

The pepsins hitherto in the market have been open to the following objections: The soluble scale pepsins contain a large amount of peptone, and on this account are exceedingly hygroscopic. Their absorption of water induces decomposition and they soon lose all digestive power. The insoluble scale pepsins contain a large percentage of mucus which, when once dried is exceedingly insoluble and very liable to decompose (these facts accounting for the insolubility and disagreeable odor characteristic of insoluble scale pepsin). The decomposition of such a delicately organized ferment implies deterioration in peptic value.

The precipitated pepsins containing as they do a large proportion of salt are superior to the foregoing, in that they retain longer their digestive power; owing to the preservative action of the salt, even though they are not readily soluble.

These three classes include all the pepsins heretofore offered, and in our experiments we aimed to exclude mucus which is responsible for insolubility, and peptones which are accountable for the hygroscopic character and hence the deterioration of the scale pepsins. The results we have obtained have more than met our most sanguine expectations and we are now prepared to supply three new preparations of pepsin superior to all standards of excellence previously accepted, viz: *Pepsinum Purum in Lamellis*, *Pepsinum Purum Pulvis* (*Pepsinum in Lamellis* in powdered form) and *Concentrated Glycerole of Pepsin*.

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CONFERENCE OF STATE BOARDS OF HEALTH.—The Fifth Annual Meeting will take place at the Grand Hotel, Cincinnati, Friday, May 4, preceding the Annual Meeting of the American Medical Association.

BRING YOUR MICROSCOPES.—Let us organize a microscopic Society, and bring our microscopes with us. Let each show how he works and what he works with. This movement, started by Dr. Barringer, bids fair to be very popular.

VACCINATE NOW.—There is a general neglect of vaccination in our smaller towns and in the country. One Superintendent of Health informed the Secretary of the Board of Health that there had been no vaccination in his county since the war—a most unaccountable lethargy for any community to be in. Small-pox, after having disappeared from the United States, was imported on both sides of the Continent, and is now located in several towns and cities. Now is the time to vaccinate, and Superintendents of Health should urge it upon the county authorities to attend at once to it. North Carolina has the cleanest record of any State in the Union on small-pox and cholera, but can only maintain it as regards small-pox by vaccination.

THE LOMB PRIZE ESSAYS.—The North Carolina Board of Health have sets of the Lomb Prize Essays put up in stout envelopes for distribution among the Superintendents of Health and School Teachers and others. The subjects are as follows: "Healthy Homes and Foods for the Working Classes"; "The Sanitary Conditions and Necessities of School Houses and School Life"; "Disinfection and Individual Prophylaxis Against Infectious Diseases" (alternate pages in German); "The Preventable Causes of Disease, Injury and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding Them." These essays can be procured on application to the Secretary of the Board, in Wilmington. Sets can be supplied to factories and schools at cost on application.

THREE NEW BOOKS.—We have received two new books of unusual interest and merit from Messrs. Lea Brothers & Co. : “A Practical Treatise on Diseases of the Skin,” by James Nevins Hyde, A.M., M.D. (Price \$5.50), and “A Treatise on Dislocations,” by Lewis A. Stimson, B.A., M.D. (Price \$4.00), which will be noticed in May JOURNAL. Also the Fourth Fasciculus of the sumptuous work on Syphilis, by Dr. Prince A. Morrow, from Messrs. William Wood & Co. (Price \$2.00 a fasciculus.)

TO OBTAIN VACCINE LYMPH WITHOUT PUNCTURING THE VESICLE.—Dr. W. C. Grigg, in the *British Medical Journal*, April 14, gives an excellent plan for securing lymph from a vaccine vesicle without rupturing it, in this way avoiding the drawing of blood or marring its integrity. He puts a drop of pure glycerine on the ripe vesicle, and gently rubs it with a smooth surface like the glass head of a shawl-pin. In a minute or two the bead of glycerine will have increased to twice its size by the absorption of the lymph. A second and a third drop of glycerine may be used in the same way on the vesicle, if it happened to be a plump one. We would like to hear of the application of this method.

WHEN SHOULD ANTIPYRIN BE GIVEN?—Antipyrin should be administered with, or immediately after, a meal, otherwise pain, nausea and discomfort may result from its contact with the walls of the stomach. The cutaneous manifestations which sometimes follow ingestion are probably due to vaso-motor disturbances characterized by peripheral dilatation of the arterioles. In certain cases the rash has simulated that of scarlatina, with intense itching. There is every reason to suspect that in consequence of the present great demand for the drug, due care may not be employed in its manufacture, and it is suggested that an analysis should be ordered whenever toxic symptoms are observed. Dujardin-Beaumetz claims to have detected a mixture of benzine in certain samples, the presence of which would explain many untoward effects. It should be borne in mind, especially by the public, that we have in antipyrin a useful but potent agent, the use of which in unskilled hands may, and will, in a certain proportion of cases, give rise to severe, and even fatal, symptoms. Manufacturers would also do well to look a little more closely to the purity of the drug, otherwise it may fall into discredit.—*Medical Press.*—*Jour. Amer. Med. Association.*

GRAVITY AS AN EXPECTORANT.—The *Polyclinic* contains the suggestions that inverting a patient and causing him to cough while in this position will unload the bronchial tubes of mucous secretion and avert impending death.—*Daniel's Texas Medical Journal*.

ESSENTIAL PARALYSIS IN CHILDREN.—Professor Parvin ordered for a child six years of age, suffering from essential paralysis, the inflammatory stage having subsided, faradism to the periphery, twice a day, and 1-48 grain of strychnine three times a day. Keep the skin active by bathing, etc.—*Col. and Clin. Record*.

VAGINISMUS DURING PREGNANCY.—Dr. John Morris, of Baltimore, reports a case of vaginismus during pregnancy (*Maryland Medical Journal*), a very rare thing indeed. The writer of this treated a case of vaginismus coming on shortly *after a first labor*, which is much rarer. It was probably induced by a septic fever resulting from the employment of a silver catheter which had been used on a patient suffering with puerperal fever, the instrument not having been thoroughly cleansed.

WOOD ALCOHOL A NEW INDUSTRY.—An establishment has been erected in this city for the distillation of alcohol from the refuse product from the Creasote Works. The Creasote Works distill from light-wood—dense resinous pine-wood—a complex product, of which creasote is one of the most important. A large by-product, which has heretofore been waste, is now utilized in the production of alcohol. There is no internal revenue tax on this alcohol, and large quantities are used in the arts.

STRANGULATED HERNIA.—Gester, of New York, says the incision in herniotomy for strangulation should extend well above the inguinal or femoral ring, and should freely expose the place where the hernia escapes from the abdominal wall. By doing this the surgeon will be enabled to divide the constricting band under the guidance of the eye, and without the necessity of inserting the probe-pointed knife into the inguinal or femoral canal, a circumstance that may, even in the hands of a cautious and expert surgeon, lead to cutting or laceration of the intestine, especially if it be very brittle, or necrosed, or adherent. It must be admitted that this often practically converts herniotomy into laparotomy.—*Medical Times*.

OBITUARY.

JOHN G. A. DICK, M.D.

Dr. John G. A. Dick died of heart disease, at his home, near Alfordsville, in Robeson county, on the 12th of April last, in the 61st year of his age.

At the age of 17 years he graduated with honors from Davidson College and shortly afterwards began the study of medicine with his brother-in-law, Dr. D. P. Weir, of Greensboro, N. C. After completing his medical education in Philadelphia, he located in Rockingham county, where he practiced his profession until 1863, when he removed to Robeson county, where he continued his professional labors up to a few months before his death.

Dr. Dick possessed high intellectual powers, and was an able physician. He was a man of unflinching integrity, was generous and gentle in disposition, and no one surpassed him in kindness and tenderness of heart.

He was the third son of the late Judge J. M. Dick, of Greensboro, and a brother of the late Dr. W. A. Dick, of Lumberton.

R. F. K.

READING NOTICES.

J. F. TOWNES, M.D., Ada, Tenn., writes: "I have used Lactated Food in several cases of general debility and loss of tone of the stomach. Also in one bad case of cholera-infantum, and must say that it not only came up fully to my expectations and your promises, but went beyond them."

BEAUTIFUL CHEMICAL PREPARATION.—A snow-white mass of Caffeine, the active principle of coffee (200 pounds and of great value), is now on exhibition in the window of William R. Warner & Co., 1228 Market street. This beautiful crystalization represents ten tons of coffee, and is used as an ingredient in the preparation of Bromo Soda prescribed for the cure of headaches, migraene, nervousness, sea-sickness, etc.—*Philadelphia Inquirer*.

° CHRONIC PULMONARY CATARRH.—J. S. Swain, L.K.Q.C.P. and L.R.C.S., 37 Park Lane Terrace, London, Eng., says: "I have used S. H. Kennedy's Extract of *Pinus Canadensis* in the following case: Mr. C., aged about 35, suffering from chronic pulmonary catarrh, with pain in left side and great expectoration, cough paroxysmal and lasting some minutes; gave Extract *Pinus Canadensis* internally; after second bottle the expectoration was less, pain in the side left, and felt more in throat, and he coughs less, and feels better in himself."

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLET THOMAS, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

CASES FROM PRACTICE IN DISEASES OF THE THROAT AND NOSE.

Lectures on Diseases of the Throat, and Nose, and Materia Medica
and Therapeutics in the Charleston Medical School. Read
before the South Carolina Medical Association, April 11.

By W. PEYRE PORCHER, M.D., Charleston, S. C.

Case 1.—*Posterior Pharyngeal Polypi of Unusual Size—Successful Removal.*

I present here two specimens of posterior pharyngeal polypi marked Nos. 1 and 2. No. 1, which is about the size of a small hen-egg, was taken from Miss D. W., æt about 21, who had been referred to me by Dr. C. H. Schroder, of Charleston, S. C. She stated that she had suffered from catarrh for a very long time, and that it had been very much aggravated during an attack of typhoid fever through which she had just passed. Her voice was very dis-

tinctly nasal in character, and her continuously open mouth and general appearance indicated that there was some pathological condition of her throat or posterior nares.

Interior rhinoscopic examination revealed no other hypertrophies or other obstructions. Color nearly normal and no deviations or deflections of her septum. Posterior rhinoscopy revealed the most dependent portion of a tumor about the size of a small hen's egg, which had embedded itself in the posterior pharyngeal space, its lowest portion resting just above the arch of soft palate. The tumor occupied the whole of posterior nasal and pharyngeal space, so that she found it impossible to breathe through her nostrils, and the consequent habitual mouth-breathing greatly aggravated the usual dry tongue of typhoid fever, and caused her exquisite suffering. This obstruction also accounts for her nasal intonation, which was very marked.

Being embedded so firmly in the surrounding tissues, it would have been very difficult and dangerous, if not impossible, to have torn the tumor from its base with forceps, and the only other method was equally impracticable, viz: by means of pieces of tape or cord passed through each nostril and encircling the tumor, or by Olliver's operation of cutting down through the bony portion of the nose and removing the tumor through the aperture thus made. I therefore resorted to the following expedient, which proved absolutely efficient and comparatively easy of execution. Before describing this, however, I must show you an instrument which I devised for operating on the posterior nasal space. It is a Self-Retaining Uvula and Palate Retractor. This instrument, as will appear from the cut, is an ordinary palate-hook, upon the stem of which a slide-attachment has been added. From the front of this slide project two arms, which end in two medium-sized rings, and at its rear is an automatic spring-catch which penetrates the perforated stem at short intervals. When in position the two rings on the arms rest on either side of the nose, just above the alveolar processes, and are easily retained there by the counter-pressure of the retracted palate. It is light in construction, weighing but four hundred and forty-five grains, easily adjusted, and releases both hands for operation and the management of the mirror. At my request, Dr. J. Allen Miles, D.D.S., made the original model, as I found the old method of operating—by means of pieces of tape or cord passed through the

nostrils and clamped or tied over the upper lip—so disagreeable to the patient, as well as difficult and awkward to the operator. It lifts up and retracts the palate with perfect firmness and security. In fact, so entirely efficient has it proved, that with it operations can be performed in the posterior nasal space as easily as in any other region. It has been highly commended by distinguished laryngologists, as well as by general practitioners.

The following letter was received from Dr. J. Solis Cohen, to whom I submitted a model of the instrument, and he has kindly consented to its publication :

1421 Wall Street, Philadelphia, September 28, 1887.

My Dear Doctor :—To-day is the first opportunity I have had to give the instrument you forwarded to me a trial. I was very successful in using it, and without cocaine. I like it very much indeed, and I think it is the simplest mechanism I have seen.

Yours very truly,

J. SOLIS COHEN, per F.

The palate being securely retracted with the instrument and the patient's tongue firmly depressed with a Turk's tongue-depressor, Dr. Jarvis's curved snare, which had been previously armed with a large wire loop, was passed back of the soft palate. With the small rhinoscopic mirror in one hand and the snare in the other, the loop was easily made to encircle the tumor, and, being pushed up to its pedicle, slow turns were given to the milled screw or nut, and the pedicle was screwed close to its origin, which proved to be the posterior end of the inferior turbinated bone.

After pulling the tumor out of its bed, the patient expressed the greatest relief and suffered no inconvenience whatsoever from the operation, as the hemorrhage was very small. The stump of the pedicle became enlarged twice afterwards, and necessitated a repetition of the operation each time.

The patient is now in excellent health, and her nostrils are perfectly patent and free from obstruction.

Case 2.—

This case was very similar to the preceding. The tumor, however, was much larger and the patient had in addition numerous polypi in both nostrils.

The occlusion which began in the right nostril evidently originated from a shelf of bone which projected from the septum and pressed against the right alæ, almost entirely occluding the right inferior meatus to such an extent that an ordinary probe could scarcely be passed into it, so that it was extremely difficult to get at the pedicle, and I can only do this by cutting away a portion of this projection and then remove the remaining portion of the stump. The polypi were all removed and the patient can now breathe through his nostrils with comparative ease.

Case 3.—*Hypertrophy of the Pharyngeal Tonsil.*

Case referred by Dr. A. N. Bellinger, of Charleston, S. C. I regret very much that the specimen from this growth could not have been kept and shown here, as it had to be removed in so many small portions, and under so many difficulties, that they could not be preserved.

This patient, like the two former, came to me under the impression that he suffered from catarrh and had been on that account refused admittance into a naval training school ship. He was entirely oblivious of the presence of any growth, although he had very decided nasal intonation of voice. No posterior rhinoscopic examination had ever been made. He was in good health generally, except occasional fœtor breath, which annoyed both himself and his family.

On posterior rhinoscopy a tumor presented itself growing out from the posterior pharyngeal wall about the size of the first phalanx of the thumb, rough and uneven in shape, and appearing to be almost a malignant growth at first sight. It proved, however, to be an unusually large hypertrophy of the third or pharyngeal, or, as it is sometimes called, Leischka's tonsil. His turbinated bones were also enlarged from the contiguous inflammation. I found the tumor quite sensitive, so that the parts had to be thoroughly cocaineized before anything could be done, and the hemorrhage was so great that I could only remove it in small portions.

The self-retaining palate retractor, above referred to, being slipped into position, as much of the tumor as possible was first snared off with the Jarvis curved wire snare, and the base was then thoroughly seared with the galvano cautery knife at a red heat. This left the

parts comparatively smooth and the patient has gone on a sea voyage of several year's duration.

Case 4.—*Pharyngitis Simulating Incipient Phthisis.*

The next case was of the most unusual interest, every phase of its development seeming to shed new light on the absolute correctness of the diagnosis, as proved by the entire relief obtained from what might have terminated with the most disastrous results.

The patient, a physician of high standing and great intelligence, has very kindly given me a written statement of his case, which I append :

DEAR DOCTOR:—In compliance with your request, that I should give you a written statement of my indisposition, I will say that it commenced about eighteen months ago, when I got a fish-bone stuck in my throat, causing much discomfort, with hoarseness of voice and violent paroxysms of cough, which lasted more or less all night. In the morning I was relieved. I have had, however, ever since, some irritation about the fauces, which at times would increase and bring on the cough and hoarseness, which would pass off after a few days. About three months ago I had a severe attack of asthma, lasting about twenty-four hours, followed by constant cough and expectoration. After a careful examination by two of my friends, my lungs were pronounced sound and normal. I then went to you to have my larynx examined. You pronounced that normal, but diagnosed a pharyngitis, which you thought accounted for all the trouble, and encouraged me to hope that you would soon relieve it, which you have done. After the first application to the throat the irritation was less and the cough and expectoration almost ceased. With each subsequent application the improvement has been marked, and now the irritation and cough returns only occasionally, and the cocaine spray relieves it with the asthmatic symptoms (which always accompany it) immediately. Frequently a week or ten days passes without my being inconvenienced or having to use the spray. I am entirely satisfied that your diagnosis of my case is correct, and your treatment, with the result, has established the fact beyond a peradventure. The cough, expectoration and asthma are caused by the pharyngitis and have been relieved by your skilled treatment, for which I shall always feel grateful.

Very truly yours,

DR. W. P. PORCHER, March 12, 1888.

I would state, in addition, that the doctor's friends and family were so anxious about him, under the impression that his lungs were necessarily the seat of his disease on account of the extreme violence of the paroxysms of cough, as well as the profuse perspiration, expectoration and nervous relaxation following them, that he was urgently advised to go to some place where his lungs might heal. Fortunately, however, on account of the entire absence of any signs of disease by physical examination, the doctor determined this to be a fallacy, and laryngoscopic examination amply supported him in this conclusion. A distinct localized pharyngitis was diagnosed, and that the cough was produced solely by reflex irritation, first excited by the fish-bone and kept up afterwards by the irritating discharge from the inflamed surface. The doctor was under the impression that this discharge came from the larynx, but as there was no laryngeal inflammation present, according to Lennox Browne and other authorities, it must have trickled down into the larynx, and being an irritant, was coughed out again.

The treatment in this case consisted at first simply of a strong solution of nitrate of silver applied to the posterior pharynx and previously cocainized. This would usually serve to relieve his spasms of cough and asthma for several days, and on their return a spray of cocaine muriate would cut short the paroxysm with perfect certainty. I afterwards used a spray of chloride of zinc, grs. xxx— $\frac{3}{4}$ i of water, and after making the applications the cough and asthma have been entirely checked, as the doctor has found it unnecessary to call at my office in nearly three weeks.

Here we have an example of how an inflamed pharynx can excite and keep up the most severe paroxysms of cough and all their sequelæ, which, if not recognized and allowed to run on, would irresistibly have been followed by disintegration of lung tissue, and the patient would pass for an incurable consumptive.

HOW TO PALPATE THE ABDOMEN.—Let the patient take a deep inspiration, and when he exhales at once follow the abdomen firmly with the palm of the hand — *Medical Times*.

NECROSIS OF THE LABYRINTH AND FACIAL PARALYSIS.

By RICHARD H. LEWIS, M.D., of Raleigh, N. C.

In the December number of the *Archives of Otology* Bezold, of Munich, in an elaborate consideration of this subject, places the total number of recorded cases at 48. It is therefore sufficiently rare, especially when its gravity is considered—the death rate in the 48 cases being 19.6 per cent.—to render desirable the addition to the literature of the subject of reports of other cases. So, wishing to aid, in my small way, in filling the storehouse of medical facts, I propose to record a case of that disease recently under my care.

Mrs. R., æt 42, consulted us on September 28th, 1887. She gave the following history: Ten years before, without having had any previous trouble, she was attacked with such severe pain in the right ear as to literally make her “tear her hair.” In due time the ear discharged and the pain was relieved. Six months later she had another attack of pain, and in a year a third, though the two last were not so severe as the first. From this time to the summer of 1885 there were no special symptoms beyond a very slight otorrhœa, sufficient only now and then to find its way unaided to the outer world, and generally showing itself as dried accumulations on a hair-pin inserted to relieve a sense of fulness in the ear. In the latter part of the summer of 1885 the ear began to discharge more freely, and she then had vertigo for the first time, and so marked was it that she could scarcely walk without holding on to the wall or other support. There was *no pain* at all. Her family physician syringed out the ear, and removing “something hard,” remarked to her husband that there was dead bone in the ear, and urged her to seek special advice at once. The swimming in the head continued several weeks and then passed off, though the discharge continued, varying in amount.

Early in August, 1887, giddiness reappeared. At first it was about the same in degree as in the former attack, but it soon became so severe that she could not walk at all without assistance. After two or three weeks pain set in—a dull, aching pain, running from ear to back of head and neck, thence forward over the vertex, apparently in a band about the width of her hand, to the centre of the

forehead, when it would become agonizing. For three weeks she could not sleep on account of it, although it was remittent in character. During this period, a week before I saw her, the pain at the time being of a dull aching character, she became unconscious and remained so for two hours and a half. A lay friend who was present told her afterwards that her pulse could not be felt even over the heart. After this she observed for the first time that she could not shut her right eye, but she had noticed a drawing of the mouth and difficulty in eating a fortnight before—about the time the pain began. She also said that the muscles of the back of the neck were perfectly rigid. She had several hard-shaking chills, with hands and feet like ice at irregular intervals, and without perceptible fever afterwards, though she thought she must have had fever because she felt so weak. She unquestionably did have fever after the attack of unconsciousness, and no doubt did before, as she had it nearly a fortnight after I first saw her.

When she came to our office she was quite feeble, with a rather anxious expression of countenance and the characteristic appearance of facial paralysis on the affected side. The paralysis was not complete, for, while the right eye did not wink, it could be partially closed by a decided effort. There was no redness, swelling or tenderness, nor had there been before, nor was there any afterwards whatever about the mastoid process. She was absolutely deaf on the diseased side, perceiving vibrations of tuning-fork applied to skull only on sound side. Tinnitus was present only twice in the very first attack ten years ago, and while under our care—sounded like distant music.

On the post-superior wall of the external meatus about the junction of the cartilaginous and bony divisions there was a polypoid growth the size of a small pea. The inner bony end of the meatus was at least 50 per cent. larger than normal, owing to the evident loss of substance from the post-superior wall, extending from the plane of the membrana tympani outward one-third inch, making a kind of pocket in that situation. The drum-head, except its anterior inferior border, was entirely concealed from view by luxuriant polypoid proliferations, evidently sprouting out of a large perforation in the same and bathed in pus.

She was suffering at the time with the usual dull pain in the head. The ear having been carefully cleansed the meatus was filled with

powdered boracic acid. Next day the discharge was more profuse and she felt better.* The boracic acid was continued daily for several days, but noticing that the polypoid proliferations (I shall designate them hereafter as granulations "for short") seemed to increase in size, instead of diminish, as is usually the case under that application in my experience, a change of treatment was deemed advisable. My very natural inclination was to remove, *vi et armis*, and at once, the obstructing granulations and make a free vent for the pus, the imprisonment of which I was satisfied was the main cause of the serious symptoms, as she continued to have occasionally chilly sensations with a persistent elevation of temperature ranging from 100° to 102°. That desire was still further strengthened when one night the pain increased with the accompaniment of a drawing feeling in the muscles of the back of the neck and upper spine. I was very fearful of meningitis, but next morning she was decidedly better, and my partner, Dr. Battle, and Dr. Knox, who was called in consultation, concurring, I still thought it best to defer operative measures for these reasons: In the first place, there was not complete occlusion, because when the granulations were wiped off clean pus could be seen oozing through at one point. Detecting with the probe a very fine, delicate piece of dead bone, exactly in the situation where the handle of the malleus ought to have been in the midst of the granulations which were not pedunculated, and therefore not snarable, and supposing it to be that bone (I know now that it was the thin edge of the fragment of cochlea which afterwards came out), I was afraid to wrench it away, as I must have done with the granulations in removing them with forceps, lest with it I might tear out the foot of the stapes from the fenestra ovalis, and thereby open for the pus a new and dangerous route to the brain. So it was decided to accept the advice of that highest authority in otology, Politzer, and give alcohol a faithful trial. After thoroughly cleansing the ear of discharge, which, by the way, was never very profuse, usually with brushes of absorbent cotton or the ordinary aural syringe and warm water, or when there was pain, irrigation for twenty or thirty minutes with a continuous stream of hot water, the meatus was filled with absolute alcohol, which was allowed to

*The polypus on post-superior wall, just outside the isthmus, was removed with the snare. I expected to find the mouth of a sinus at that point, but could not make it out, and the growth never returned.

remain a half hour. This was repeated three times a day. Its effect upon the granulations was not perceptible, so they were touched twice a week very thoroughly with pure chromic acid. The local treatment was supplemented by quinine and sulphide of calcium, and for the head symptoms bromide of potassium, antipyrine, and once or twice morphine (most often the first named), which exerted a very happy effect and was usually sufficient.

From the commencement of the treatment the facial paralysis began to improve, and when she left, on the 15th of October, for the home of a friend living near the city, it had almost entirely disappeared. Once or twice afterwards a slight temporary increase in it was observed, and occasionally she would complain of twitching, or some unusual feeling in the muscles supplied by it, but it finally disappeared entirely. This paralysis, from its course and termination, was doubtless the result of an extension of inflammation without necrosis to the bony walls of the aqueduct of Fallopius, and thence to the sheath of the nerve.* Pressure of inflammatory exudation caused the symptoms—a very small amount in such a rigidly confined space producing much effect. Secondary facial paralysis, according to Politzer, is a very serious symptom, being often the forerunner of fatal cerebral trouble, and the fact that it had decidedly improved, and was not increased in the alarming attack above referred to, was a reassuring element in the case.

A few days after going to the country she had another grave attack that was quite interesting as showing conclusively that it was the result of imprisoned pus. For a day or two the discharge had been less than usual, when she woke up one morning feeling worse and more than ordinarily giddy. The vertigo increased as the day wore on, and just before bed-time she had a sinking attack, becoming cold and pulseless (according to her attendants, who thought she was dying), but not unconscious for more than a moment or two, if at all. She soon rallied, however, and afterwards felt fairly well while lying down, but upon raising up in bed the next afternoon the vertigo returned. In a short time after lying down again there was a sudden discharge of pus so profuse as to run on the pillow and

*This is the more likely from the anatomical fact that the nerve, "immediately after its passage from the internal meatus to the Fallopian aqueduct, lies directly over the first turn of the cochlea" (the portion of bone exfoliated in this case), "being separated from it by a bony wall of only one-fourth inch in thickness."

mat her hair, and she felt better at once. After this nothing of special interest occurred until about the middle of February, when dead bone hove in sight (it had been in pouch all along) among the granulations. It was removed with a hook and with much satisfaction, and proved to be the complete lower turn of the cochlea with the modiolus. From this time on the treatment of the granulations was much more effective, and when she went home, on the 4th of March, they were relatively insignificant.

A week ago I saw her again. There was a small amount of dry discharge at the bottom of the aural canal up against the lower half of the drum-head, and some in the hollow in the post-superior wall. The perforation in the tympanic membrane, which membrane was quite irregular, being largely composed of cicatricial bands, had contracted to the size of a pin-head. On the edge of it there was a small granulation. The dry matter was syringed out and apparently the granulation with it, for it did not reappear in two days, and there was no discharge whatever from the tympanic cavity in that time. Her general condition was excellent, though she was still a little unsteady in her gait at times, probably from severe remaining congestion of the semi-circular canals. She also said that for about ten days past, whenever she turned over quickly in bed upon her right side, or otherwise turned her head suddenly to the affected side, she noticed "rattling in her head." She could not more accurately describe the sensation, but was certain it did not sound like fluid, and the writer confesses his inability to suggest an explanation.

It is impossible to say at which time the necrosis began, but it evidently originated in the posterior-superior bony wall of the aural canal, causing the loss of a considerable amount of bone in that locality, almost certainly in the summer of 1885. After the separation of this fragment the disease seems to have remained more or less quiescent until it actively attacked the labyrinth eight months ago. After causing great and prolonged suffering, intense anxiety on the part of herself and her friends, and bringing her almost to death's door, it finally resulted in the exfoliation of a part of the cochlea and absolute deafness on that side. One thing is probably clear, and that is that the cause of all the trouble was a neglected chronic otorrhœa, pure and simple, as there was no predisposing diathesis, and the lesson to be drawn herefrom is the importance of impressing upon our patients the fact that *a chronic discharge from the ear is not a trifling matter, and that it should always receive prompt and proper attention.*

DIETETICS IN CONSUMPTION.

(Printed from advance sheets of "A Hand-book of Dietetics," by
W. B. PRITCHARD, M.D., now in press and to be issued in May.)

Of all the diseases to which the human family is subject there is not one which has so long and so successfully baffled the efforts of the most distinguished scientists of the medical profession in their attempts to discover a specific cure as the dread affection which is the subject of this paragraph. Only a few years ago, comparatively, the subject of Phthisis or Consumption was looked upon as the sure victim of inevitable death, sooner or later, and the physician gave a silent acquiescence to the verdict which he did not believe could be changed. Occasional recoveries were considered, as either instances of mistaken diagnosis or unaccountable and illogical interpositions of Providence. This was in the day of heroic or aggressive medication—the period when the lancet and 20-grain doses of calomel held sway together as masters of the field, and there is no doubt but that this plan of reducing or "altering" the patient's system hastened, rather than delayed, the fatal end. A revolution of ideas has since taken place with the result that conservative enlightenment holds the supremacy so long usurped by traditional ignorance, and in no single instance has the change been attended with better or more marked results than in the treatment of consumption. The lack of success attending the administration of remedial agents of the directly medicinal group heretofore, and the clearer knowledge of the nature of the disease and of its demand for the highest nutrition has thrown the treatment of these cases very largely into the province of dietetics. The disease is just now attracting a degree of attention from the medical and scientific world never before attained, and it is to be hoped that the results of experiments and observations now under investigation will give to us absolute control of the morbid process causing it. Among those who have recently made valuable contributions to the literature of this subject are Uffleman, Bergéon, Munk, Senator, Detweiler and DeBove among European investigators, and the Solis Cohen, of Philadelphia, and others in this country. Without exception, all authorities of the present day insist that the essential and most important element of treatment consists in the observance of certain hygienic rules as to purity of atmosphere and surroundings, carefully regulated and appro-

ate exercise and the administration of foods such as will carry the nutrition of the patient up to the highest point attainable.

In arranging a diet table for the subject of consumption or phthisis several considerations present themselves which should exert an important influence in the selection of food. In addition to the indications presented by the specific lesions found in the lungs there are frequently sympathetic or associated derangements of the digestive system which demand consideration. This derangement of the digestion I have found invariably present, and I consider it a constant feature of consumption in cases of any lengthy duration. The most important principle to be observed in feeding phthisical patients is involved in the statement that the good results are proportionate, not to the amount of food taken into the system, but to the amount digested and absorbed. Remembering and observing this principle, the diet should be adjusted to the attainment of the highest possible nutrition, and it may include any article not incompatible with the digestive capacity of the patient. The objective point is to compensate the system as nearly as possible for the tissue waste incident to the disease, and its importance may be appreciated when it is stated that a patient's progress towards recovery bears a direct ratio to the increase in body weight. Very many articles have been recommended as possessing peculiar advantages in this class of cases, and various diet tables, some good, others useless, have been arranged and published as worthy of trial. Cod liver oil was for a time regarded as almost a specific in the treatment of consumption. It is now known to be valuable solely as a nutritious article of food, possessing special value in that it is capable of partial self-digestion. Its field has been much restricted in the treatment of chronic pulmonary troubles recently. In some cases it has been found to be not only of no value, but directly injurious in that it provokes indigestion. In incipient consumption, or to relieve the consumptive tendency, its most important field of usefulness may be found. Its use should be continued in one or two teaspoonful doses *ter die* for several months. If it disagrees by the stomach, it may be given by inunction using twice the quantity. I prefer this method of administering it in early childhood or with patients of a bilious temperament. It should be used conjointly with a generous diet and a life in the open air. Senator (*Therapeut. Monatsh.*) advocates the use of fats and fatty acids in chronic wasting diseases, and claims most excellent results. Some of his views will strike the

observant reader as peculiarly novel, though they are based upon established facts in physiology. Fats, as ordinarily met with in foods, are not digested in the stomach, but are split up in the intestine by the pancreatic juice and bile into fatty acids and glycerine. This glycerine is itself easily decomposed into the volatile fatty acids. Some of the fat is emulsified and absorbed. The fatty acids are absorbed either as fatty acids or after being saponified (made into soaps) by admixture with the alkalies of the bile. Fats in the form of oils surround and inclose other foods taken at the same time in the stomach, and by preventing the gastric juice from reacting other foods actually retard, and even prevent, digestion. The glycerine is not known to serve any valuable purpose, and may even interfere with the accumulation of fat in the tissues. Senator suggests, in view of these facts, that oils and fats be given in the form of fatty acids without the glycerine, or, better still, the final product of the digestion of such articles, namely, soluble soaps. Thus far he has only prescribed pills of the solid soaps of soda, and to prevent it from being partly split up in the stomach into fatty acids, he gives the soap inclosed in capsules of keratin, which is not dissolved off until it reaches the intestine. The soap may also be taken in the form of powder with powdered gum. Five grains of palmitic and two and a half grains of oleic acid to the pill or powder is the usual dose prescribed. Other substances related to the fats, but in which the fatty acid is combined, not with glycerine, but with another alcohol are recommended. Chief in value among these articles Senator places cetaceum (spermaceti), given in the form of a dry powder in doses of from two drachms to an ounce. It may be mixed with sugar to make it more palatable. Spermaceti is especially recommended as conveniently replacing cod liver oil. By many milk is esteemed the most valuable of any single article of diet to be given to tubercular or phthisical patients. Still others give the first place to flesh, and especially beef. The grape cure, koumiss cure and whey cure has each its school of disciples, but while any or all three of these articles may be used to advantage in association with other articles, they cannot be depended upon alone. If milk be selected as the diet, it should be that of a healthy cow. If given alone, two or three quarts should be taken in twenty-four hours, or about eight ounces*every three hours. The milk should be lukewarm, should be sipped slowly, and the patient should

remain comparatively quiet. Koumiss may be occasionally substituted for the sake of variety and with beneficial effect. Cocoa, on account of the large quantity of fat it contains, is very appropriate as food. A better result is attained if other foods be given in conjunction with milk. Eggs, roast chicken or beef, ripe fruits, wheaten bread, baked sweet potatoes or rice may be added, if there is no diarrhœa. If diarrhœa occurs, the diet should be changed at once. In threatened or actual hemorrhage all stimulants, such as tea, coffee, hot soups, carbonic acid waters, beers, wines, brandies, etc., are to be avoided on account of their effect upon the heart and circulation. Alcohol is, however, entitled to be classed as a food in consumption. Taken very moderately, say a teaspoonful or two three times daily, after meals, it assists digestion and assimilation and prevents or retards tissue waste. The opinion of a large number of the medical writers and specialists of to-day is to the effect that animal flesh, especially beef, is entitled to the first place in diet tables for the consumptive. The best results are attained when the beef is taken raw or slightly cooked after the method described in a preceding paragraph. It is not necessary or desirable that fat be removed unless special indications exist which demand its exclusion. The raw beef should be taken at least three times daily, about four or five ounces at each meal. Most excellent results have been obtained from a raw beef diet taken in conjunction with copious draughts of hot water before meals, which is essentially the vaunted "Salisbury Method" of treatment in consumption and dyspepsia. It is not necessary that beef should constitute the exclusive aliment, but it should be prominent as the chief article. Raw scraped ham may be substituted for the beef occasionally with benefit. Milk is entitled to the first place as an adjunct. Bread should be taken in limited quantities, and that made from unbolted wheat or gluten bread will suit the case best. Cream, butter and oil dressings with salads may be used freely; vegetables of the succulent and leguminous groups, as lettuce, tomatoes, celery, green peas, okra, etc., are admissible and serve a useful purpose.

Uffleman of Germany has tabulated his experience and observation in consumptive dietetics in several bills of fare which are introduced as worthy of consideration and adoption in many cases. For a consumptive who can bear only a small quantity of consistent food he gives :

I. Morning, 7 o'clock—Milk eight ounces, teaspoonful of cognac with toast bread two ounces.

8 o'clock—1 cup of cocoa, 1 oiled with milk, 6 ounces.

10 o'clock—Milk and cognac as at 7 o'clock.

Noon—1 cup of beer broth with yolk of an egg, 5 ounces of milk and rice, 1 glass of red wine.

Afternoon, 4 o'clock—Sweetened coffee with milk, 5 ounces, and 2 ounces toast bread.

6 o'clock—1 glass of milk and cognac as above.

Evening, 8 o'clock—1 plate (10 ounces) milk soup, with 2 ounces toast bread.

Night—1 glass of milk, 6 ounces.

II. Mornings, 7 o'clock—1 glass milk with cognac and 2 ounces toast bread.

8 o'clock—1 cup sweet coffee with milk, 6 ounces.

10 o'clock—1 cup beef broth with yolk of an egg.

Noon—1 plate wine sago soup, mashed potatoes, $2\frac{1}{2}$ ounces of raw scraped ham, prune sauce.

Afternoon, 4 o'clock—1 cup coffee with milk, 2 ounces toast bread and butter.

6 o'clock—1 glass of milk with brandy.

Evenings, 8 o'clock—1 plate malto-leguminous soup with meat extract, bread with butter, 2 ounces scraped ham.

Nutritive value (1 and 2)—92—105 grams albumen. 85—94 grams fat. 220—250 carbo-hydrates.

III. Bill of fare for chronic febrile consumption who was free from dyspepsia and gradually gained in weight. .

Mornings, 7 o'clock—Six to 7 ounces milk, 2 ounces toast.

10 o'clock—1 cup of beef broth with yolk of egg, 2 ounces wheat bread and butter, 1 ounce scraped ham, 2 ounces roasted chicken.

Noon—1 glass of milk.

Afternoon, 1:30 o'clock—1 plate of soup (wine, beef or noodle), roasted meat 4 ounces, with rice or mashed potatoes, or green vegetables, $1\frac{1}{2}$ ounce toast bread with cheese or ripe fruit, 1 glass red wine.

5 o'clock—Milk soup with wheat flour or rice, or oatmeal, or weak tea with plenty of milk, with three ounces wheat bread and butter, two ounces cold veal roast, or, in the place of latter, 1 ounce of cheese or smoked beef tongue.

Nights—1 small cup of milk.

Nutritive value about 121 grams albumen, 86 grams fat, 350 grams carbo-hydrates.

DIETETICS OF CHRONIC TUBERCULOSIS AT THE SANITARIUM FALK-
ENSTEIN, AS DESCRIBED BY DETWEILER.

Mornings, 7 to 8 o'clock—Good coffee or tea or cocoa, as the case may require, rusk and butter, wheat bread with butter, soft and not too fatty pastry, enough to satisfy. After this 1 glass of milk in small sips.

Mornings, 10 o'clock—1 to 2 glasses of milk, taken in sips, or a small bottle of koumiss, bread and butter. On special indication : Bouillon with egg and bread and butter, or cold meat with bread and butter and one glass of wine. If possible, one glass of milk besides.

Noon, 1 o'clock—Baked vegetables, dessert, wine, pure or mixed with seltzers.

Afternoon, 4 o'clock—1 glass of fresh milk or koumiss, or bread and butter with wine or brandy.

Evenings, 7 to 7 : 30 o'clock—Warm meat with potatoes, rice, cold meat, fine sausage, game with salad, wine.

Late—1 glass of milk with five teaspoonfuls of brandy.

In case catarrh of the stomach should intervene, a semi-fluid or fluid diet is immediately resorted to, which brings about a normal condition in a few days. At that time there may be given :

Mornings, early—Tea or light coffee and toast, 1 glass of milk.

9 o'clock—1 glass of milk.

10 o'clock—Bouillon with yolk of egg.

11 : 30 o'clock—1 glass of milk and rusk.

1 o'clock—Vegetable soup with ground meat and hashed beef-steak *a la* Tartare, wine.

3 o'clock—1 glass of milk with rusk.

7 o'clock—Chicken or vegetable soup, one or two soft-boiled eggs, 1 glass of wine (Boudeaux).

Late—1 glass of milk with brandy.

Patients often have an aversion towards warm roast; we should then give it cold.

Some six or seven years ago a Frenchman, DeBove by name,

wrote a series of articles advocating forced feeding or gavage in the treatment of phthisis. He claimed that the effect was to decrease the fever and the tissue waste, to increase the body weight, to check the tendency to diarrhœa and to improve very greatly the patient's appetite. The following description of DeBove's method and the principles involved, which is taken from a paper read by Dr. Solomon Solis Cohen before the Medical Society of the State of Pennsylvania will be found both lucid and valuable :

"DeBove being convinced that many consumptive patients, despite loss of appetite, maintained comparatively good powers of digestion and assimilation, determined to resort to mechanical feeding. He therefore passed into the stomach, through the mouth, a flexible rubber-tube connected with a funnel (such a tube as had been employed for lavage—washing the stomach—and the method of introducing which will be described in the latter connection), and by this means introduced much larger quantities of food than the patients would voluntarily swallow. The taste of the aliment thus administered becomes a matter of no consequence, and we are, therefore, able to select that which will give the most nutriment in the smallest bulk. Meat powders were adopted as the basis of DeBove's nutritive mixtures; but milk, eggs, soups and farinaceous powders may be used, either separately or in conjunction therewith. When necessary, pepsin, pancreatin, hydrochloric acid, etc., may be added, or peptonized aliments be employed. A mixture that was used with advantage by Dr. Stern, of Philadelphia, and myself, in the cases of two patients treated at the Philadelphia Polyclinic, consists of a quart of milk, two tablespoonfuls of beef powder, three eggs, fifteen grains of scale pepsin, and thirty drops of dilute hydrochloric acid, warmed, and administered twice a day; the patient eating what he wished in the interval. In hospital service forced feeding is practised three times daily, but in private practice we must be content with what is possible.

"Meat powders may be purchased in the shops, or can be prepared at home by cutting boiled meat into little pieces, drying thoroughly by means of a water bath and grinding in a coffee-mill. Powder so prepared is said by Dujardin-Beaumetz to answer its purpose very well. The farinaceous powders used in France are prepared from cooked lentils, malted lentils and maize. I have no personal experience with them, but they are said to be highly nutritious. About

seven ounces of the alimentary powder, whether meat or farina, or both, are mixed with a quart of milk or water or milk and water; the milk being added slowly to form a paste, which afterwards dissolves readily in the additional liquid. When the long tube of DeBove cannot be passed, or when patients will not allow it to be passed, it often suffices simply to pass the entrance of the œsophagus with a shorter tube, as recommended by Stoerk; or to make use of the special apparatus of Dujardin-Beaumetz or Bryson Delavan, which consists of a glass jar with two tubes, one of which, above the level of the fluid, communicating with a hand-bulb œsophageal sound of small calibre; an ordinary rubber catheter will answer at a pinch. When the bulb is compressed the food fluid is driven over. Efforts of swallowing on the part of the patient will facilitate the process."

Any discussion of the subject of dietetics in consumption would be radically incomplete without a reference to the value of the various preparations of malt in this disease. While it is admitted that the diet should be largely nitrogenous (of which class meat is here referred to as a type) it is equally important that a certain amount of carbo-hydrates should be represented in the food given. By lessening the waste of albumen and of fats also, they render valuable service. The highest type of the carbo-hydrates, from a nutritious and assimilative standpoint, is to be found in malted milk. In the dietetic treatment of consumption or any other disease involving great tissue waste, the result of either a direct tissue consumption or of mal-nutrition, I do not recall any single article of food which so nearly compensates the loss as malted milk. Containing, as it does, all the elements of tissue growth, the albuminous, as well as the carbo-hydrates, and in a form unirritating, permanent and easily digestible, its value is so self-evident as hardly to require the force of argument. In the diarrhœa of phthisis it may be given with benefit when milk alone will occasion distress. In the occasional exacerbations of the affection, with a corresponding rise of temperature and consequent increase in the impairment of the digestive organs, it will be found both palatable and nutritious. The increase in body weight is more rapid with malted milk as the principal diet than from any other single article. Alcohol, in the form of good brandy or whiskey, may be taken with it when necessary. It may be mixed with soups and broths, custards, oat-

meal, gruel or porridge made from any of the cereals. If rich, pure country milk from grass-fed cows can be secured fresh, it may be "malted" extemporaneously by the addition of a small quantity (a tablespoonful to the pint) of Dry Extract of Malt (Horlick's), which has the effect of diluting the caseine of the milk and partially predigesting it. Malted Milk or Dry Extract of Malt may be given alone or in connection with any special or general plan of diet, and always with benefit in consumption.

THE NEW ANTIPYRETIC ALKALOIDS.

By F. P. VENABLE, Ph. D., F.C.S., Chapel Hill, N. C.

The alkaloids form one of the most interesting as well as one of the most puzzling classes of organic compounds. They present very pronouncedly the characteristics of bases, the name being derived from their similarity to the alkaline bases. Beyond this, however, their chemical nature and constitution is but little understood. Only of late have chemists been in a position to study them intelligently, making a slow, but encouraging, advance in our knowledge of them.

If the name be made to include, as is done by some authors, all nitrogenous organic bases, then many of them are the product of ordinary synthesis, can easily be prepared artificially and present no great complexity of structure. The distinctive alkaloids, of which morphine, caffeine and quinine are types, are the products of plant-life. Their structure is unknown, and many attempts at forming them artificially have met with little success. Manifestly it would be a great triumph of chemical skill if the valuable and costly quinine and cocaine could be prepared from the same coal-tar by means of which so many miracles have already been wrought.

Attempts at the artificial formation of these alkaloids have been successful mainly along two lines of research, viz: in the formation of Pyridin and Chinolin derivations. Pyridin and some of the Pyridin-bases are gotten from the distillation of bones and bituminous shales. Pyridin can be looked upon as very closely allied to Benzol—it is a nitrogen-substitution product of it. So far

neither Pyridin nor its derivatives have found industrial or medicinal use.

Chinolin, on the contrary, though not applied to any useful purpose itself, yields many derivatives useful as coloring materials and a whole series of antipyretica. Chinolin is prepared by distilling quinine or cinchonin with potash. Pyridin-bases are formed at the same time. Chinolin is constituted similarly to Naphthalin. Its formula is made up by the union of a Benzol with a Pyridin formula. Hence their near relationship and formation together when Cinchonin is distilled with potash.

Because Chinolin can be formed from quinine, and bears also a certain resemblance to it in its chemical action, it was, at one time, used as a febrifuge, but its use is now discontinued since we can form derivatives from it much more like quinine.

Among the coloring matters gotten from Chinolin we have a very handsome blue, called cyanin; also a Chinolin red, which is especially useful in photography for securing orthochromatic emulsion plates; and lastly, a fine Chinolin yellow, forming an excellent material for dyeing silk and wool.

From the Pyridin-bases Ladenburg has succeeded, by a complicated series of reactions, in building up an artificial Coniin, similar in every respect with the volatile alkaloid gotten from *conium maculatum*, but every attempt at synthesizing the valuable alkaloids of the *Cinchona* bark has failed. To these attempts, however, we are indebted for a series of bodies which can be used to substitute quinine in many ways.

The first of these therapeutically valuable Chinolin derivatives was Kairin, which was used as an antipyretic, but was soon abandoned, as it was found in the clinics somewhat dangerous. Then Thallin was discovered by Skraup, owing its name to the characteristic green color which it gives nearly all oxidizing agents. It does not seem to have found much use.

But by far the most useful and interesting of these synthetic alkaloids is the one called Antipyrin by its discoverer, Knorr. He seems to have given this name to two substances very near akin to one another, and probably having similar action and therapeutic value, but so far as I know only one of these is now used. Knorr, too, increased the value, both scientific and practical, of his discovery, by going back to coal-tar, as it were, for the materials from

which to make Antipyrin. He formed his Chinolin derivative from anilin and aceto-acetic ether. We are thus entirely independent of the natural alkaloids, and do not have to start by distilling the costly products of Cinchona bark. The scientific name of this Antipyrin is dimethyl-phemyl-oxy-pyrazol, which conveys to the organic chemist much information as to the nature of the substance. To one unversed in that science the name seems only awkward, and the description of the steps in its preparation would be unintelligible.

Since the discovery of this substance by Knorr, in 1884, it has met with a widely extended use; within the past few months it has even been recommended as a preventive of sea-sickness. If the claims made for Resorcin, one of the pseudo alcohols or phenols, are substantiated, however, we will not have much need to apply Antipyrin to such a use, as Resorcin is said to be a remedy as well as a preventive.

Anilin itself may well be classed among the organic bases, though it is not properly an alkaloid. It and its salts have generally been regarded as poisonous, but Cahn and Hopp have shown that in small doses the action is antipyretic. They found the product of the action of acetic acid upon Anilin, or, as it is called, Acetanilid, to be the most useful derivative of Anilin for the purpose, and to this the name Antifebrin is given. Under this trade-name the substance is patented, though quite as unjustly, as it is only acetanilid, and this has been known for a long time. If physicians were to buy it under the latter name they would doubtless escape paying quite a royalty on the patented name. The physiological action is most probably due to a decomposition, in the system, into anilin and acetic acid.

We will add to this list of artificial organic bases the much talked of Saccharin, though it is in no wise related to the bases already mentioned. Its chemical name is Benzoic-sulphinid, and it was discovered by Jahlberg when working under the direction of Remsen in the Johns Hopkins Laboratory. Indirectly it comes from coal-tar. That is, the substances from which it is prepared by a series of steps, can be gotten from the coal-tar of our gas-works. Like the Chinolin derivatives, it is an antipyretic. It is also valuable as an antiseptic, but has attracted most attention as a possible substitute for sugar in many cases.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN, for the Use of Students and Practitioners. Second Edition. Thoroughly Revised and Enlarged. By James Nevins Hyde, A.M., M.D. Philadelphia : Lea Brothers & Co., 1888. Pp. 676.

The United States can now boast of having the best and freshest literature on Dermatology, surprising in the number of its volumes. Five years ago Dr. Hyde published his first edition of the book before us, and he now presents us with a revision of that volume, which shows faithful rewriting, making it in reality a new volume.

The arrangement is as follows : Anatomy and Physiology of the Skin, General Symptomatology, Etiology, Diagnosis, Prognosis, Therapeutics and the Classification adopted by the American Dermatological Association. Then come special descriptions, Disorders of the Glands, Inflammations, Hæmorrhages, Hypertrophies, Atrophies, New Growths, Neuroses, Parasitic Affections. The author has carefully revised the work to make its classification and nomenclature conform to that adopted by the American Dermatological Association.

He has adopted the plan of inserting his formulæ for remedies in the text. The illustrations are few, but good. He has selected from his own cases, to illustrate in colors, two rare diseases, *Nevus Lipometodes* and *Xanthoma* of the Hands and Elbows, the workmanship of which is far above some of the text-books in which such illustrations have been attempted. The wood-cuts are clear and instructive.

No reader will fail to note that the author is a master of excellent English, his style, in fact, reminding us of the scholarly flow which characterizes the writings of Charles West, and we know of no higher praise we could accord him.

The whole appearance of the book is that of a faithful exposition of dermatology, and the printer's art has been carefully bestowed upon it to make it a handsome volume, a delight to the eye, a welcome companion to the working outfit of the busy doctor.

PROFESSOR J. FORD PRIOLEAU, M.D.

We announce with sorrow the death of Prof. J. Ford Prioleau, M.D., of Charleston, S. C. It occurred on the 11th April, he being 62 years of age. Since 1871 Prof. Prioleau has filled the chair of Obstetrics in the Medical College of South Carolina. He was an exceedingly modest man, a student of earnest purpose, a gentleman of great purity and affability. The writer of this recalls with pleasure many hours profitably spent in his company at the first Conference of State Boards of Health in Washington City a few years ago.

DR. EDWARD G. LORING, the well-known ophthalmologist, died in New York suddenly, on the 25th April, in the 48th year of his age. He was distinguished as an author and an improver of the ophthalmoscope, and his death is a great loss to the profession of New York. The death of Dr. Agnew and that of Dr. Loring, both eminent in their specialty, and partners in business at one time, makes a great gap in the brotherhood of ophthalmologists.

TOXICITY OF BORIC ACID.—Gaucher has made recent investigations on the extent to which boric acid may be safely administered. He estimates that to poison an adult a dose of $2\frac{1}{2}$ ounces must be given daily for ten days. He has used it externally, as usually done in skin diseases, with good results, and has prescribed it internally in phthisis, in doses of 8 to 15 grains daily, with advantage. As it is eliminated by the kidneys, he suggests its internal use in cystitis, thus avoiding the irritation produced by catheterization.—*Gazette Médicale de Paris*.

SULPHONAL—A NEW HYPNOTIC.—This substance is "diethylsulphondimethylmethan," discovered by Baumann, of Freiburg. It crystallizes in large, colorless tables, and is perfectly devoid of smell and taste. It dissolves in 18 to 20 parts boiling water or 100 parts cold water. It is not affected by oxydizing agents, and is therefore very stable. In one experiment upon a medical man to whom was given 46 grains it proved a hypnotic. In 60 patients it produced sleep. The ordinary dose is one-half drachm (*Brit. Med. Journal*). The reports are very rosy, and we hope it may prove half as efficacious, as it is said to procure sleep even in cardiac valvular diseases.

MINUTES

—OF THE—

THIRTY-FIFTH ANNUAL SESSION

—OF THE—

Medical Society of North Carolina.

FAYETTEVILLE, N. C., May 8, 1888.

FIRST DAY—Morning Session.

Local Committee of Arrangements.

Dr. J. A. Hodges, as chairman of the Committee of Arrangements, said: I now call this meeting to order.

Rev. J. H. Wheeler opened the session with prayer.

Dr. J. A. Hodges said: Members of the Medical Society, as the representative on this occasion of our people and their hospitality, I have the pleasure to introduce my distinguished fellow-townsmen, the Hon. G. M. Rose.

ADDRESS OF WELCOME.

Mr. President and Gentlemen of the North Carolina State Medical Society:

The members of the medical faculty here have placed on me the pleasing task of welcoming you to the historic city of Fayetteville, and it is a pleasing task. Representing not only them, but all our citizens, in their name and their behalf I extend to you a cordial greeting. Coming from all sections of our grand old State, the representatives of one of the leading, if not the leading, learned profession of our land—coming nearer to our hearts and our hearthstones than any, save the ministers of our Christian religion, we are

glad to have you with us, glad to see your faces, thrice glad to welcome you to our homes.

In these days of utilitarianism—in these days when all the different classes are organizing for earnest effort—when the trend of things is toward progress and advancement, it is the highest duty of your profession, most of all, that these annual meetings should be held; and it is a high privilege for any community, any people, to have your presence and the benefit of your learning, your counsel and your discussions. Need I add that it is a compliment to your skill and ability that your own communities could spare you for even a few days? What people are so missed from a community as the doctor? The nearest and dearest friend of the family is gone when he departs—and I doubt not that now, in many a home in North Carolina, some anxious eye is turned towards Fayetteville and some anxious heart is beating with pulsing throb for your return.

Did I say that yours is a learned profession? It is more than that—it is the loved profession. While learning, skill, experience, nerve, and oftentimes apparent cruelty, ought to be part of your equipment, still there is something gentler, something more soothing, something that comes nearer reaching the tenderer chords of the human soul, and sounding its softer melodies that brings it so close, so near to the human race—something that sweeps that harp upon whose strings the smallest hands can play heaven's sweetest tunes on earth.

When the light first begins to dawn upon a human being you are there to usher in its weak and feeble life. When childhood begins to totter and its innocent tongue to prattle, you are with it to direct its footsteps and guide its pathway. When youth puts forth its strength and grasps for yet more vigor, it is the physician that leads the way and points to strength beyond. When manhood and womanhood has pushed behind the frivolities of youth and stands erect, bearing upon its shoulders the responsibilities, the virtues and the beauty of perfected life, it is he that tells how to protect that life, how to adorn it with all the beauty and all the loveliness that perfect health can bestow and make it still better able to bear her burden and her cares. And when old age, with its withering blight and frosting breath makes feeble our footsteps and makes its furrowed lines upon our wrinkling brow, it is he who with gentle hands smooths the gathering frowns and make easy its declining years.

Yea, in life and in death, in health and in weakness, in joy and in affliction, in trouble and sorrow, your profession comes nearest the human family, so near that the law respects its sanctity and veils forever from the public gaze its closest ties and tender associations, and woe be to him who tears the veil away and invades its sacred precincts.

Representing such a profession, you are here to consult among yourselves of the duties, the cares, the advancement made during the past year, and to make yourselves, by friction of mind with mind, more able to meet those responsibilities that have been cast upon you in your sphere of life. And as such I welcome you once again to the good old town of Fayetteville—old in her memories, old in her traditions, old in her hospitalities, old in all that makes her open-handed and open-hearted, but new in progress, new in advancement, with a new life, new hopes, new aspirations and a new determination to efface from her brow the blighting effects of war and again place her on the high road to prosperity.

Ah! we have traditions to which we cling—we have memories we would not forget, and to the scenes of those traditions, to the home of those memories we now invite you.

Do you wish to revive the memory of womanly valor and heroic devotion?—we invite you to the ruins of the home of Flora McDonald, the Scottish heroine who, with a woman's tact and a woman's tenderness, in her own rugged Scotland, saved her "bonny Prince," who was hunted from mountain to dell and from crag to cavern. Would you linger around one of the loveliest spots in all the Cape Fear country?—go with me to the limpid waters of Cross Creek, and gaze where tradition says two beautiful streams in the years ago were wont to cross each other on their meandering way to the sea. Would you quaff our life-giving waters, more pure and sparkling than those beside which the temples of your heathen god were wont to be erected?—then taste of those of Cool Spring, of which it is said that when once drank the memory forever lingers, and you ever desire again to taste the cooling draught. Would you view the sterner realities of life, and see the horrid waste of war?—then go with me up yonder hill and behold its desolation and its blight—see the place that once was life and stir and beauty, now, alas! but brick and mortar—its beauty gone, its people scattered and but ruin left to mark the track of war. It is the old Fayetteville Arsenal.

Should you tire of seeing these sights, and need something to refresh the inner-man, then find Tokay, the hospitable home of Col. Green, and taste his sparkling wines.

But we have more than traditions, more than memories—we have life, we have energy, we have hopes, we have industries and trade, and we are building more and more for the future. Though left by the exigencies of war in that track of fire which swept like a besom of destruction across this fair land, we have not lain idly down mourning over our losses and thinking only of the past—but look around you while here, see the evidences of thrift, see our stores, our factories, our hotels, our varied industries, and tell your people when you return that Fayetteville is old or dead no longer—tell them that she is no longer the isolated town she was, but that with her railroads, her telegraph and her other varied resources, she is stretching out to greet the world.

See her lovely women and her beautiful girls, always the fairest of the fair, and if you are young yourselves, or on your second pedestals, come again when you have more time to stay.

To these, and all these, I welcome you, but above and beyond all, I welcome you to our hospitality and our homes. If there is one distinguishing trait in our character of which we are more proud and of which we are most jealous, it is of that open-handed, generous-hearted, warm hospitality for which our forefathers were noted—to these and to more—to our homes and our firesides, we welcome you, but owing to our salubrious climate and our pure, life-giving waters, please excuse us from taking your physic while here.

RESPONSE.

Dr. R. H. Lewis, in response, said: Mr. Chairman, ladies and gentlemen, and fellow-members of the Medical Society of North Carolina: When approached, on yesterday afternoon, by one of my medical friends in the city with the request that I would do him a favor, not for a moment suspecting its nature, I was quite overwhelmed when he informed me that it was to reply to the Address of Welcome on behalf of the Medical Society. To my protestations that he should seek a more eloquent tongue, one better fitted to represent such a body of men, he turned a deaf ear, and, soothing my agitation with kind words of encouragement, he insisted that I should undertake the duty,

Feeling that it would be ungracious in the recipient of such a cordial welcome as I had met with, to refuse to do anything and everything I could to gratify my friends here, I with many misgivings consented. But you must not forget, ladies and gentlemen, that we medical men, owing to the peculiar nature of our calling, are more men of action than of words, and I cannot hope to tickle your ears with the rounded periods of my distinguished friend of the legal profession. I can only, as a plain and simple man who loves his friends, say for myself and my fellow-members of the Medical Society, that we cordially reciprocate the kind sentiments so gracefully expressed. Whenever those of us who have not enjoyed a previous visit have heard the name of this old town there has been suggested to our minds the idea of a quaint old-fashioned and rather slow community, embowered amongst flowers and inhabited by a generous and refined people, and since we have come among you we find that our ideas were not false, but that they were more than true. We find in Fayetteville the beautiful and graceful and cultured women, the warm-hearted and genial men, the generous and delightful hospitality we anticipated, but we find more. As we walk your streets we hear the sound of the hammer, the rasping of the saw, the ring of the trowels, and we see rising before us handsome and substantial buildings designed for business and for the joys of home life. And it is a sincere pleasure to note these things. After such cordial words of welcome, we cannot but feel that you are our friends, and we rejoice in your increasing prosperity. Although we be as a traveller that tarryeth but a day, we shall carry away with us delightful memories of our rest, short though it be, from the heat and dust of our ordinary lives under the grateful shade of your vines and fig trees, and we shall carry with us, also, the wish for the prosperity of your community, of your city, and for the happiness of all the good people in it.

SESSION FORMALLY OPENED.

Dr. Hodges then formally declared the Convention open and ready for business. Dr. T. D. HAIGH, President, in the Chair.

THE ROLL WAS THEN CALLED.

The following committees were appointed:

Committee on Finance—W. H. Lilly, G. W. Long, D. T. Tayloe.

NOTE.—The names of all members present will appear, with special designation, in the list of members at the back of the Transactions.

Committee on Credentials—Foote, Brodie, Thomas.

More Attention to the Credentials of Applicants.

The President said: Last year there was not sufficient attention paid to the credentials of some who were admitted to the Society, and it is desirable that this be guarded against this year.

Proposed Alteration of the Constitution.

Dr. G. W. Long read a report upon resolutions as to the alteration of the Constitution of the Society.

Dr. Thomas F. Wood moved that the report be received and stand for a special order to-morrow morning at 9 o'clock.

Dr. Hodges said: I have an invitation from the young men of the Carolina Club of this city extending an invitation to every member of this Society to go to their Club Rooms at any time convenient.

Dr. G. W. Long: I move that the thanks of this Society be tendered to the members of the Carolina Club for their cordial invitation, and that it be accepted as far as possible.

Communication from Medical Society of Wilson.

The Secretary read a communication from the Medical Society of Wilson to the Medical Society of North Carolina.

To the Medical Society of the State of North Carolina:

Gentlemen:—I have the honor to present the following resolutions adopted by the Medical Society of Wilson county at its last meeting:

Resolved, That the Medical Society of the State of North Carolina be, and it is hereby, invited to hold its next annual meeting in the town of Wilson.

Resolved, That the Secretary be instructed to present this invitation at the Fayetteville meeting.

WALTER BRODIE, President.

C. E. COOK, Secretary.

Dr. Booth moved that the communication be received and its consideration postponed until the regular time.

Resolution as to the Violation of the Law Regulating the Practice of Medicine.

Dr. G. G. Thomas: I would like to say that I am informed by a

member of the Board of Examiners that there are one or more persons in this State who are now in possession of a temporary license, and that so far they have not sought a permanent license, and there is reason to suppose that they do not propose to get one. Of course a temporary license is abrogated after the time has expired for the meeting succeeding the grant of such license. The young men who have sought licenses are suffering a great injustice by these young men being allowed to practice, and it becomes the duty of the State Society to inquire into this thing, and this resolution means that this Society must not only adopt some measure, but must back it up by money. The measures to be adopted can be reported by the Committee hereafter. A lawyer must be employed to overlook the whole matter and to present these persons to the grand jury, and I offer the following resolution :

Resolved, That in view of the fact that there are certain persons in North Carolina who are practising medicine and surgery for fee or reward, without a license, or in possession of only a temporary license, it is deemed necessary to take such steps as may bring these persons before the courts of the State ; and as such violation of the law affects very seriously the influence and the well-being of the Society,

Resolved, That a committee of three be appointed by the President at this session of the Society, to report at the session to be held next year such measures as may be deemed necessary to correct this evil.

Dr. Foote: I do not agree with Dr. Thomas, but if you appoint this committee let it be done now ; there is no use in postponing it twelve months, but I see no necessity for it. There is not a man who does not know that he cannot practice without a certificate, and the people have found out that if you do not possess a certificate they need not pay you. I could mention men in my State who have never prosecuted a man, but who have easily closed out unqualified practitioners. We have the law to do this. If a young man without a certificate comes into a State to practice he is liable to thirty days for a misdemeanor. Let us use the law or repeal it. It has been suggested that we employ one lawyer in the State, but it would cost \$500 to do so, and we cannot afford it. We have the law and let us execute it. Every judge visiting Warren county has made it a charge that no man has a right to practice medicine without a license, and what more do we want ? If a man chooses to let a quack come into his neighborhood and not take action in the matter, it is his own fault.

Dr. Booth : I am sure that the adoption of a resolution like this

is of much more importance than it would seem. It is an unfortunate fact that the average citizen lets his sympathies go with the irregular practitioner. If a physician finds a man practising in his neighborhood without a license and should say anything about it, the public say that he is prejudiced and is actuated by jealousy and envy. If the attention of the grand jury is called to the man and they do not act promptly, he will say that he makes no charge for his services and that the people simply make him a present. It unarms the regular practitioner.

Dr. Satchwell: I wish to express my sympathy with the resolution of Dr. Thomas, and I rather think it would be better to have action taken at once. I believe that if we have any statutes in North Carolina protective of the profession and of the community, it is the duty of the judges and ourselves to see that they are executed. The time has been when a doctor who spoke up for the honor of the profession was denounced as interested, but that is all altered. I am for still further laws if they are needed, and I want some action taken by this Society in the matter at once. I wish to ask the Society what our relations are with respect to those medical men in North Carolina with diplomas who have graduated since 1880. I know such men cannot collect their fees by law.

Dr. G. W. Long: I, for one, will support the resolution introduced by Dr. Thomas. I think it will agitate the question and call the attention of the doctors throughout the State to the law on the point. If any respectable physician will go to the solicitor of his county or district and say that A or B is practising medicine without a license and that C and D are witnesses, the solicitor will endorse a bill and send it to the grand jury.

Dr. Foote: I do not want to oppose the spirit of the resolution, but I do not want to be taxed to carry it out, as taxes are pretty heavy now. My objection is that it will cost us \$1,000 to carry out what Dr. Thomas suggests, and we have enough laws on the subject already. It does not require a solicitor—the grand jury are aware of the law and make it a charge in my county every time. We have the law and the power, and if we do not exercise it it is our fault.

Dr. R. H. Lewis: It is a trite fact that what is everybody's business is nobody's business, and consequently in most towns the law is not practically enforced. The friends of the man who is

prosecuted attribute to the doctor mean and base motives; they say that he is moved by jealousy and envy, and the result is that each individual physician considers that it is not his business any more than it is the business of any one else, and he will not assume any such invidious burden, for he knows that he will be criticised unfavorably. The Society should do it officially and have no individual adversely criticised. Even if it costs a good deal of money, I shall be glad to bear my share. The present law, while a very good one in many respects, needs straightening up, and this same committee should feel the next Legislature and see whether it is advisable to bring it up or not. I think registration for a nominal fee would be a good idea, and any man practising or offering to practice medicine in North Carolina who was not registered be subject to imprisonment, so that no one could evade the law by saying he was not paid. I think it would be to our pecuniary benefit; it may not be to my individual benefit, but taking the aggregate of the Society I believe the money would be an excellent investment, because it would shut out those underhand competitors who take a good deal of money away from us.

The Secretary read again the resolution at the instance of Dr. Satchwell.

Dr. R. H. Lewis offered the following amendment: That the committee be empowered to employ counsel, and if they deem it safe and advisable, have the existing laws perfected by the next General Assembly.

Resolution was passed as amended.

Obituary—Dr. Otis F. Manson.

Dr. S. S. Satchwell:

WHEREAS, We have learned of the death of Prof. O. F. Manson, and whereas it is no less our duty than our pleasure to give permanent expressions to our deep sorrow on account of his death, and our high appreciation of his eminent merits, both as an active and an honorary member of our Society and of the medical profession at large, and also as an honored citizen of our State; therefore be it

Resolved, that we painfully realize our sad loss in the death of Dr. Manson, our friend and associate, and feel that his absence creates a void that is truly afflictive.

Resolved, That as a member of this Society, as a member of the profession, Dr. Manson was faithful, courteous and eminently learned and skilful—always reflecting honor on the calling he loved so well

by the urbanity of his manners and his high attainments as a physician.

Resolved, That we hereby tender our sympathy and condolence to his honored family, and express our earnest hope that the Great Physician may heal the wounds that His own hands have made, feeling assured that however dark and mysterious this dispensation of his providence may be to them and to us, it has been ordered by a merciful and wise God.

Resolved, That a copy of these resolutions be sent to his family.

GEO. A. FOOTE,
S. S. SATCHWELL,
THOS. F. WOOD,
Committee.

Dr. Foote : I knew Dr. Manson from boyhood. He was one of the grandest men I ever knew. He was true to every instinct of his profession. I think it is proper that this Society should appoint a committee of three to prepare resolutions of regret. I wish I had a letter I received from his widow last Saturday, which I intended to have read as a matter of interest, showing how she felt towards this Society.

The Committee appointed to draft resolutions to the memory of Dr. Manson and Dr. Dillard, an honorary member recently deceased, are, Drs. Foote, Thomas F. Wood and S. S. Satchwell.

The Case of Dr. J. M. Gallagher.

The Committee appointed to investigate the case of Dr. J. M. Gallagher, of Washington, who was recommended as a member by Drs. Joseph Graham, G. W. Long and C. J. O'Hagan, and about whose right to practice some irregularity is suspected, are Drs. Barringer, Murray and Long.

Request to Register.

The President remarked that it was most important that every member of the profession who was present should enter his name legibly in the register provided for the purpose.

The following candidates were reported by the Board of Examiners as having passed :

Drs. Robert A. Reynolds (col.), Murfreesborough; Elmira Travers (female), Raleigh; Jas. W. McGee, Jr., Raleigh; Frank T. Merriweather, Asheville; Jos. T. Sherrill, Salisbury; A. E. Ledbetter,

Guilford; Jessie O. Walker, Randolph county. Accepted and adopted.

The Committee on Credentials reported the following applicants for membership of the Society :

Drs. Duncan Sinclair, Plainview; C. W. Sawyer, Elizabeth City; W. J. Lumsden, Elizabeth City; J. A. Faison, Mount Olive; W. B. Harrell, Dunn; J. E. Brothers, Stantonburg; D. S. Ellis, Woodburn, Northampton county; W. S. Anderson, Wilson; Chas. B. Woodley, Trenton; Duncan Smith, St. Pauls, Robeson county; Charles H. Smith, Randolph county; Duncan Smith, Athens, Robeson county; A. McKinnon, Lumber Bridge, Robeson county; James W. McGee, Jr., Raleigh; B. C. Moore, White's Store; George H. Moran, Morganton; N. B. Herring, Wilson; L. G. Broughton, Reidsville; Alexander McDougald, Cumberland Mills; Wm. Josephus Jones, Clayton, Cumberland county; J. B. Robertson, Clayton, Cumberland county; G. H. Dodd, Clayton, Cumberland county; J. A. Griffin, Godwin; J. C. Grady, Seven Springs, Wayne county; J. R. Pearsall, Manchester; W. D. Luca, Wilson county. Accepted and adopted.

Adjourned to 3 o'clock P. M.

FIRST DAY—Afternoon Session.

The Society was called to order at 3 o'clock.

Professors Michael and Coskery Invited to Seats.

Dr. Long introduced Drs. Michael and Oscar J. Coskery, of Baltimore, Md., and said it gave him great pleasure to move that they be invited to take a seat among them and participate in the discussions. Carried.

Report of Section on Surgery.

Dr. P. B. Barringer, then read his report of Section on Surgery. (See Appendix.)

Dr. Michael, of Baltimore, Md., being invited to make remarks on the above report said: I am grateful to the gentleman who last spoke for one word which gives me a little handle by which I may take hold, and that word is "ANTISEPTIC" SURGERY. That is a

word which has a tendency to inspire any one who has the opportunity to compare the surgery of the past with the surgery of the present, and if it will entertain the Society I think the most practical way in which I can discuss the paper just read would be to give a little of my own recent experience in regard to the use of antiseptic surgery and to the manner in which it has aided me. I have had occasion to perform certain operations since the 1st of January, 1888, which, though not so unusual as those related, illustrate the virtues of antiseptic surgery and teach us to what extent we may depend upon this provision to ward off dangers with which we have been more or less familiar. I have had a series of cases of head wounds which are interesting and in which I think the success which has followed the treatment has been, to a very large extent, due to the kind of surgery referred to.

In the month of January an individual was brought into the hospital who had been working about a manufacturing establishment. He incautiously put his head under a revolving wheel and was struck on the left temple, producing a compound depressed fracture of the skull. There were at the time of his admission no brain symptoms; he simply had a wound which penetrated the soft parts and depressed the bone, breaking it nearly through. Following out the very simple elements of what I think is the present state of the surgical art, and with such precautions as I shall briefly describe, the parts were thoroughly scoured with water and then washed with a solution of sublimate.

All the instruments were prepared by being soaked in a solution of carbolic acid and the hands of all the assistants were thoroughly cleansed. The wound was enlarged, exposing the state of affairs which I have just described. I found it impossible to raise the bone, so I lifted out the part which was depressed and washed out the wound, and followed that by a dressing with antiseptic gauze. The dressing of the wound was followed by no symptom whatever except a swelling of the eye on the affected side, which first made me fear he was getting an inflammation, but this was set aside by the fact that he had no fever. The dressing remained on ten days, and after three dressings and in three weeks he walked out apparently as well as ever. He has since reported all well.

A case came into the hospital about the middle of Mareh. A mechanic was turning at a lathe when the chisel flew up and struck

him on the forehead. He was treated in the way I have just described with regard to the first case. I picked out the bones which showed the front walls of the frontal sinus, and various small pieces, too numerous to mention. The nose was broken across the bridge. The most tantalising element was that, after removing this bone, there was an opening in the dura mater through which the blood spurted, having just a slight pulsation, and it became a question as to how that was to be dealt with. I tried to pick up the point on the tenaculum and eventually succeeded in pulling out the fibres so as to reduce the spurting, and then, filling the wound with iodoform gauze and applying moderate pressure, the wound was dressed. This individual, much to our surprise, developed no symptom of inflammation, and there was no further bleeding. The first dressing remained on about twelve days and the wound continued to heal until at the end of four weeks he walked out of the hospital with only a superficial wound, which would take sometime to disappear.

These and other cases, which I have not now time to describe, have given me very great satisfaction, and I think, according to the experience of surgeons in general, it will be just to say that the constant good result which has followed these operations is due in part, at least, to the use of these antiseptic remedies.

Important questions present themselves in the view of antiseptic possibilities in the treatment of hernia in cases of strangulation or constriction and those upon which it may be necessary to perform the radical operation. I think it is important that we should consider the radical operation as one of extreme importance, and I would like to say to the Society that it has been my habit in doing the operation for strangulated hernia, when it becomes necessary, to do at the same time the operation for the radical cure of hernia, and I have had some cases in which it has been successfully and satisfactorily carried out.

In the operation for the radical cure of hernia so great is my confidence in the results which may be brought about by the use of strict antiseptic precautions, that I am very much in favor of doing the operation in all cases where it is difficult, painful or impossible to wear a truss.

Dr. P. B. Booth: I move that the thanks of the Society be ten-

dered to Dr. Barringer for his paper, and that it be referred to the Committee on Publication. Carried.

Dr. N. B. Herring read a paper on "Some Freaks of Malaria." Referred to Committee on Publication. (See Appendix.)

Address by the President.

(See Appendix.)

It was voted, on motion of Dr. Faote, that a committee of three be appointed to consider the President's Address.

The Chair appointed on this Committee Drs. Poote, Payne and Thomas.

The meeting then adjourned till 8 o'clock.

FIRST DAY—Evening Session.

Annual Essay on Dysentery.

Dr. W. C. Galloway, pursuant to the order of business, read the Annual Essay, the subject being "DYSENTERY."

Dr. Way moved that the thanks of the Society be tendered to Dr. Galloway, and that his essay be referred to the Committee on Publication. Carried.

Dr. J. A. White Invited to a Seat.

Dr. McDuffie moved that Dr. White, of Richmond, Va., who was present, be asked to participate in the discussion. Carried.

Dietetics in Health.

Dr. W. C. McDuffie read a paper on "DIETETICS IN HEALTH," which was referred to the Committee on Publication.

The meeting then adjourned till 9 o'clock to-morrow morning.

SECOND DAY—Morning Session.

It was moved by the Secretary that a

Board of Censors

be appointed, which was carried.

The Committee was appointed as follows : Drs. Barringer, Payne and Bahnson.

How far the New Antipyretics have Substituted Quinine.

Dr. R. H. Lewis read a paper on "How far the New Antipyretics have Substituted Quinine."

Dr. Patterson moved the reference of the paper to the Committee on Publication. Carried.

Dr. R. L. Payne, Jr., thanked Dr. Lewis for having handled the subject so temperately, and was glad to see he was not affected by the craze which seemed to be prevalent in the profession. He believed there are dangers in the use of both Antipyrin and Antifebrin in conditions of debility associated with high temperature. In prolonged pyrexia the ganglionic nervous system is much impaired and we cannot give remedies which add to already existing dangers. These remedies, he said, do paralyse the heart, do produce dangerous cyanosis, cold, prostrating sweats and collapse. He reported two cases in which bad symptoms followed the use of Antipyrin through paresis of vaso-motor ganglia. These remedies also lessen the secreting power of kidneys and increase danger of uræmia (see experiment of Jacubo-Witsch). They also cause hæmoglobin to be transformed into meta-hæmoglobin and lessen ability of red corpuscles to absorb oxygen, and so bring on cyanosis and collapse. Let us use less dangerous remedies—depend on the inhibiting control of cold sponging, cold pack and cold douches to nape of neck.

Dr. Thomas F. Wood : I just desire to add my experience with antifebrin. I have had almost none with antipyrin. My first introduction to the use of the drug began with a case of double pneumonia. It was in the person of a girl of thirteen years of age. When I saw her she had sores upon her lips and tongue, very deaf and quite bewildered. She was taken sick a week before, and was brought to town to me. She had been given quinine in moderate doses, but it did not account for the deafness. I discontinued it, and, after administering a dose of calomel, began the administration of antifebrin. She was delirious for several days, requiring the closest watching to keep her in bed. I will not trouble you with details of the case. The pneumonia cleared up in twelve days, but the fever ran the usual course of a short case of typhoid fever, which I have represented in the chart I present. I only wish to

observe that antifebrin was entrusted to some member of the family, provided with a Hick's thermometer, with instruction that when it reached 100° that a capsule of 5 grains was to be given every hour until it again fell to 100°. The drug most always brought quiet and profuse sweating, and it will be noticed that it inverted the usual course of fever from evening to morning exacerbation.

Explanation of Diagram.—I took morning and evening temperature, nurse took intermediate temperature as a guide to administration of antifebrin. The tracings, therefore, from 2d February to end of case, show morning and evening temperature and intermediate temperature, showing how promptly the drug reduced fever.

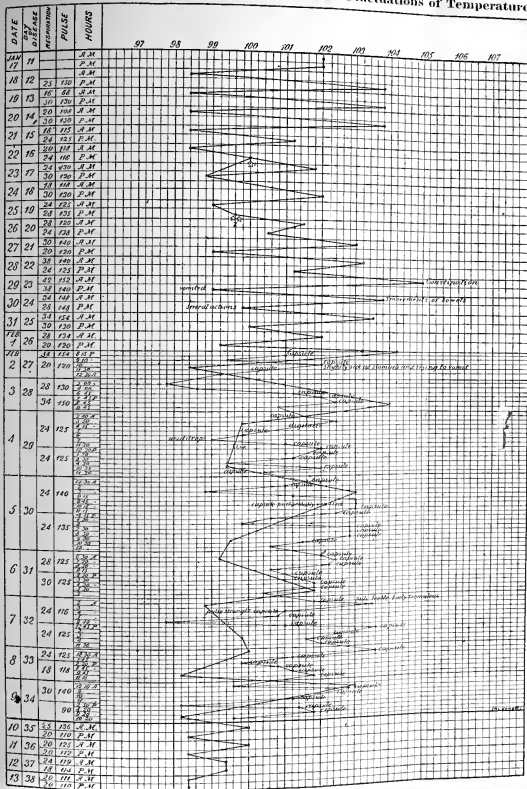
I have treated a few cases of pneumonia with the drug and have noticed none of the cyanotic appearances which have been recorded by others. I am led to believe that antifebrin in pneumonia is safer than opium, and in the hands of those who have experience in treating pneumonia can be easily managed. The analgesic effects are all that can be desired.

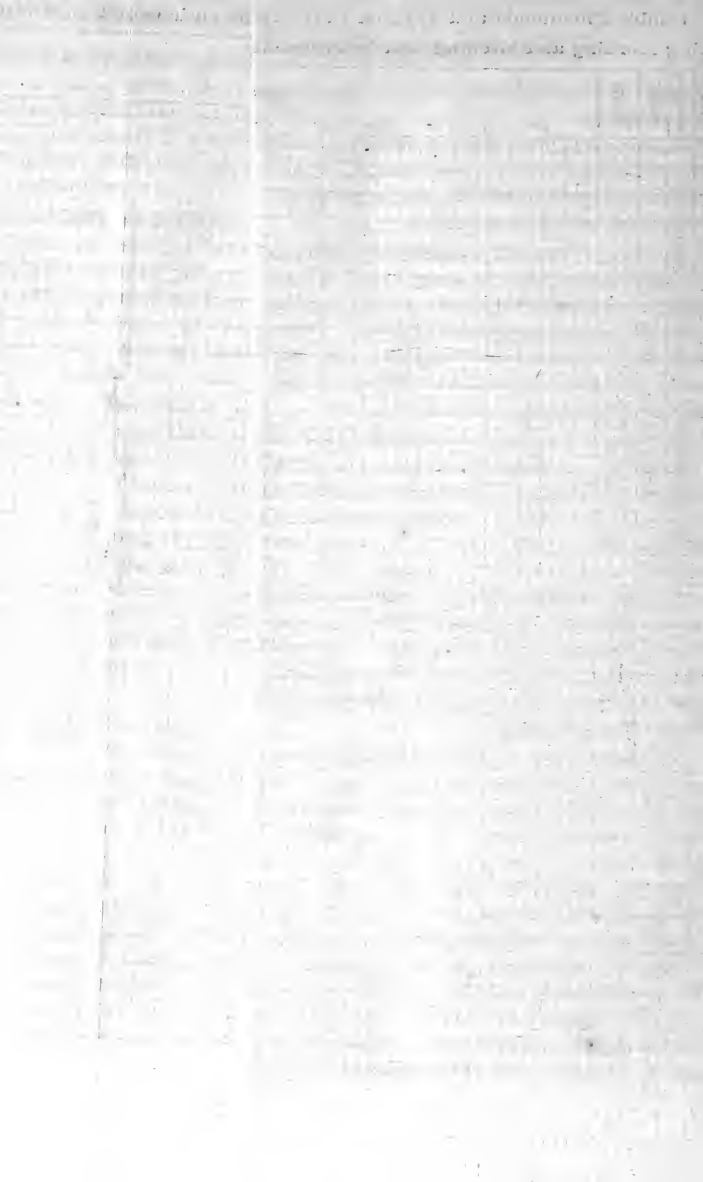
In rheumatic fever it seems to be especially valuable. I saw a patient in consultation with my friend Dr. Bellamy, or rather in his temporary absence, who was suffering with rheumatic arthritis. Antipyrin and morphine had failed to relieve his pain, and, in fact, he was so sickened by the morphine that it was discontinued, and solution of salicylate of sodium was given, with antifebrin in five grain doses at night, repeated at short intervals until sleep was procured. Throughout a long period of oriflam motion, which was concentrated upon the hip-joint, resulting in an enormous abscess, antifebrin was sufficient to subdue pain.

In the cases similar to those for which antipyrin is found useful, I have found antifebrin to answer the purpose, and there is no doubt that its effects are more lasting, the dose is smaller, and it is far cheaper.

Dr. Robinson, continuing the discussion on antipyretics, cited a case where it had been used with very happy effects. The patient was a strong, muscular man, suffering from typho-malarial fever. The doctor attending him had administered a dose of 20 grains of antipyrin, and when he was called in he thought the patient had a congestive chill. His temperature was very high. The next day they gave him 20 grains of antipyrin, and soon after he had a rigor

Case of Double Pneumonia and Typhoid Fever Treated with Antifebrin (Acetanylid)
Showing Morning and Evening, and Intermediate Fluctuations of Temperature.





so severe that he shook the bed and the mattress was drenched with his perspiration. Dr. Robinson suggested antipyrin in 10 grain doses, and though the doctor in attendance was fearful of the result, the effect was most happy. He thought if the idiosyncrasies of the patient were studied and the dose regulated accordingly, it might be administered with good effect.

Dr. Payne: In that connection I would like to call attention to my own observations. A young lady had taken a dose of 8 grains antipyrin with very happy results, and two days later a like dose produced the most dangerous symptoms. This experience has been confirmed by many other observers, who have noticed that after taking the drug all right at one time, it has produced the most unpleasant symptoms at another time.

Dr. Sykes: I have not experimented with the drug myself, but I would like to mention some facts which I have received from a professional brother who has had considerable experience with antipyrin. He has tried it thoroughly and with admirable results in cases of fever. After using the drug for some time with splendid success, he had a case where he had been using it with the same result, as he thought. He gave his patient a dose of 10 grains antipyrin, and later on followed it with another dose. Soon after leaving the house he was summoned back, and immediately returning, found his patient, a girl of about ten years, in a most dangerous state. In a short time after returning the girl died from the effect of the 20 grains antipyrin.

In a case of typhoid fever, the patient being a girl healthy and strong-looking, the antipyrin was tried in 10 grain doses. After giving a dose or two, at reasonable intervals, he had gone home, when he was again summoned to the bedside to find his patient in a comatose state. He called in a brother to assist him, and it was only after using every means they were able to induce a reaction. His friend had come very near losing two patients within a short distance of each other through the use of this antipyrin. He thinks it would be prudent to use these remedies with care and caution. He had not given it any trial whatever. He was satisfied that with the other remedies we have, we can succeed most admirably in breaking down fevers with cold applications, etc., and he was very much of opinion, from his reading and consultation, that they are

much better, that is, safer, in cases of fever than these strong antipyretics.

Dr. Carr, continuing the discussion, said with regard to antipyretics in hyperperexia that antifebrin and antipyrin are two agents we have long been looking for, and in his hands have never had a bad symptom from their use; collapse has occurred in the practice of others, but not in his. Quinine had produced collapse with him in a dose of 8 grains only, and that in a patient who was accustomed to taking quinine freely. This was proved afterwards, when collapse and diarrhœa followed the use of only 15 drops tr. cinchona comp., and again collapse followed from the patient drinking water from a glass her husband had taken quinine from, no quinine taste being left in the glass. Notwithstanding his favorable experience from antipyrin and antifebrin, on account of the unfavorable experience of some others, he always administered them with fear and trembling. For analgesic effect he much preferred antipyrin to antifebrin.

Dr. Bahnson: I have myself dispensed over 19 ounces of antipyrin since last August. I have taken a dose of 40 grains myself, which is the largest dose I have heard of, and beyond a little tingling in the ends of my fingers, a little blurring of vision and a little buzzing in the ears, I felt no inconvenience, and I was relieved of an intense headache without any unpleasant effect whatever. My experience is such, however, that if any more is to be dispensed it will not be by me—10 or 15 grain doses have not given my patients any ease or reduced their temperature. It has aggravated the nervousness which they have felt, and I have not given it in more than half a dozen cases. My experience is that antipyrin has been of use in acute cases—tonsilitis, pains in the head, earache, toothache, lumbago, spasmodic croup, and what might be called spasmodic asthma. I have in my town a family of four children whom I have been in the habit of attending for croup. They do not send for me any more, as they now keep antipyrin powders, whose action is so certain and quick that it is almost fun to have croup. Earache and toothache and almost all pains are relieved by them. A patient with intercostal neuralgia was compelled to call in a physician in my absence. He told the physician that I had been giving him large doses of morphia, which was not true, and the physician gave him a large dose of morphia. He also took on his own account

4 ounces of whiskey and half a teaspoonful of "store" laudanum, all without effect—15 grains of antipyrin relieved the pain immediately. Cases of sciatica and rheumatism are also relieved immediately. Antifebrin is superior to antipyrin, if mixed with brandy, in the relief of sick headache; it will stay upon the stomach and relieve in the course of half an hour, when antipyrin would be rejected. I do not believe in the hypnotic effects of antipyrin and antifebrin. Fashions in medicine change, like every other fashion, and now the fashionable craze is that, if the temperature of a patient gets above 103°, it must be got down or else he will burn up. For a refutation this impression, if any is needed, it is only necessary to turn to the records of the treatment of typhoid fever thirty or forty years ago, when we knew nothing about the thermometer and did not trouble about the temperature of a patient. In those days the physician who did least for typhoid fever generally had the pleasure of seeing his patients recover. I do not regard heat as necessarily an unfavorable complication of typhoid fever.

Dr. Robinson: I would like to ask if Dr. Sykes' friend weighed the doses of antipyrin? It is sometimes inconvenient for country physicians to carry scales, and they are sometimes in the habit of guessing at their doses. After carrying antipyrin in the medicine-chest awhile it becomes dry, and if not weighed there is danger of giving twice the dose intended.

Dr. Bahnson. I have never given a dose of antipyrin in my life without weighing it, and I think any country physician who cannot afford a pair of scales costing \$1.00 ought to be supplied with them. A man who dares to give a patient a dose of any dangerous drug without weighing it, ought to be prosecuted.

Dr. Sykes said he did not know whether his friend weighed the dose or not.

Report of the Committee on Credentials.

Dr. Thomas read the report of the Committee on Credentials, which was accepted.

Dr. Thomas said he wished to bring before them the case of Mrs. Amelia Travers, whose name they had not put with the rest.

Dr. Thomas F. Wood said he was opposed to admitting lady doctors to the Society, and thought that the application of Mrs. Travers should be refused.

Dr. R. H. Lewis said he was acquainted with Mrs. Travers, who was a very bright lady, and he could not see any objection to her or any other female worthy of the license joining the Society. We had already admitted Miss Alexander, who certainly had not given any trouble, and he did not think Mrs. Travers would do so. He thought all scientific men and women, provided they were on a social equality, should be admitted.

Report of Committee on Finance.

The report of the Committee on Finance was read and accepted, as follows :

The Committee on Finance report that, having carefully examined the Treasurer's books, they find—

Balance on hand April 14, 1887.....	\$914.97
Amount collected from members.....	81.00
Total.....	<u>\$995.97</u>
Bills paid per vouchers.....	552.55
Balance on hand.....	<u>\$443.42</u>

We recommend the assessment of \$2.00 per capita, and the salary of the Secretary and the Treasurer as follows, to wit, to the Treasurer \$75; to the Secretary \$100.

W. H. LILLY,
GEO. W. LONG,
D. T. TAYLOE,
Committee.

Codifying Rules of the Society.

Dr. Bahnson: Last year, at the Charlotte meeting, a resolution was passed empowering the Secretary to codify the edicts, changes in By-Laws, etc., and publish them in the Transactions. There appears no such publication, and I am informed by the Secretary and by the members of the Committee on Publication that the report sent in was not satisfactory. I desire, therefore, to ask that a committee be appointed at this meeting to report, if possible, upon such codification. Carried.

The Committee was appointed, as follows: Dr. Bahnson, of Salem; Dr. McBryde, of Maxton; Dr. Manning, of Durham.

Dr. Pierce was appointed in the place of Dr. Foote on the Committee on President's Address.

The Use of the Dilator and Intra-Uterine Stem in Dysmenorrhœa and Sterility.

A. H. Goelett was introduced by Drs. Bahnson and Pierce, and read a paper on "The Use of the Dilator and Intra-Uterine Stem in the Treatment of Dysmenorrhœa and Sterility."

Dr. Ennett said he had expected something great from Dr. Goelet and he had not been disappointed. He wished to call attention to the fact that Dr. Goelet was by birth a North Carolinian—the first water he drank was from the Cape Fear river. He moved that the paper be referred to the Committee on Publication. Carried.

Dr. Kollock Invited to a Seat.

Dr. Huntley moved that Dr. Cornelius Kollock, of South Carolina, be invited to take part in the discussions. Carried.

Report on Reorganization of the Society.

Dr. Barringer moved that the report on the reorganization of the Society be read. Carried.

Dr. Barringer then read the report, as follows :

Mr. President and Gentlemen of the North Carolina State Medical Society :

Your Committee, appointed at the last session, to consider the advisability and practicability of changing the plan of proceedings, etc., at our annual meetings, as proposed in the resolution of Dr. G. W. Long, beg leave to report that we have considered said resolution and recommend their adoption, considering the change contemplated therein both advisable and practicable.

Therefore, in order to perfect the plan therein prepared, we recommend :

I. That the work of the Society be divided into *eleven* Sections, and that the members of the Society be assigned in proper proportion to each Section.

II. That the Sections shall be as follows :

- | | | |
|---------------------------------------|---|-------------|
| 1. Practice of Medicine, chairman and | 4 | assistants. |
| 2. Surgery, | " | 4 " |
| 3. Obstetrics, | " | 1 " |
| 4. Gynecology, | " | 3 " |
| 5. Materia Medica, | " | 1 " |
| 6. Anatomy and Physiology, | " | 1 " |
| 7. Pathology, | " | 1 " |
| 8. Therapeutics, | " | 2 " |
| 9. Microscopy, | " | 1 " |
| 10. State Medicine, | " | 1 " |
| 11. Medical Jurisprudence, | " | 1 " |

III. That the chairman of each Section appointed at the annual meeting shall take charge of all work, papers and communications relating to his department for the ensuing meeting.

He shall select as his assistants for the work of his Section such members of the Society as are deemed most suited for the work in hand.*

To him shall be referred all voluntary papers and communications relating to his department. He shall, at least one month previous to each annual meeting, notify the Secretary of the titles of papers, time required to read, etc., in order that a proper programme shall be prepared.

He shall be the judge of the merit of papers submitted to his Section, and shall exercise due care that only papers of interest and importance be read or submitted to the Committee on Publication.

IV. That it shall be the duty of the chairmen of Sections, when in doubt as to the propriety or merit of any paper falling to his Section, to refer said paper to the Committee of Scientific Inquiry, whose decision shall be final, both as to publication or the reading of such paper before the Society.

V. The chairmen of Sections shall be appointed by the President at each annual meeting, and shall serve until their successors be

*While it is not engrafted in the series of resolutions, it is suggested by the Committee that the chairman of each Section confine his *official reports* entirely to the *advances* made in his department during the years of his service. When there have been no advances in a department worthy of the Society, the chairman of the Section should simply officially so state.—COMMITTEE.

appointed. Each chairman of a Section, when invited by the President to prepare the report of his Section, etc., for the coming session, shall at once inform the President as to whether he will accept or not.

VI. That at each annual meeting of the Society the following time shall be allotted to each Section :

(The Secretary will by the next meeting have prepared a scheme giving each Section its quota, in order of importance, of the allotted time.)

That the discussion of papers, etc., read, be limited to 10 minutes for each speaker without the privilege of extension. The remaining time of each shall be devoted to such other scientific and business matters as are now regularly on the programme of the Society.

VII. That there be appointed a committee of six members, to be called the Committee of Scientific Inquiry. The duties and functions of this Committee shall be to make inquiry, through the medium of many observers, into those mooted questions which are at the time engaging the attention of the medical world. That to this end they shall formulate each year a series of scientific inquiries, which shall be in printed form, mailed to each medical man in the State. That, to insure uniformity and accuracy of report, when necessary, they shall detail the method of observation. That they report to the Society at each annual meeting, in condensed statistical form, the results of such inquiries for the previous year.

VIII. That this Committee of Scientific Inquiry be composed of the six past Presidents of the Society, one retiring each year as his successor in office assumes his duties. That the Secretary of this Society shall be also the Secretary of this Committee and superintend the clerical work of the same.

Respectfully submitted by the Committee,

P. B. BARRINGER,
G. W. LONG.

Dr. Thomas moved that the report be accepted for further action.
Carried.

Dr. Jones moved the adoption of the report.

Dr. Thomas said that at present chairmen of Sections had to make a report of the whole progress of medicine in their branch ; he thought

that a deal of unnecessary labor would be avoided and the time of the Society saved by chairmen only reporting on the marked progress which had taken place in their Sections.

Dr. Long suggested that all papers be referred to the Committee on Enquiry for consideration as to whether all or any should be read before the Society.

Dr. Thomas thought it should be made a rule that all chairmen of Sections should transmit their reports and such papers as they think worthy of publication to the Committee on Enquiry thirty days before the annual meeting.

Dr. Carr moved that the Committee of Enquiry be provided with a secretary.

Dr. Pierce thought the question involved a great deal to the Society. It seemed to him that the Society was already encumbered with a great many reports involving an endless variety of duties which the Society had not time to perform, and if there was any way to simplify the proceedings of the Society he was for it. There were already seven Sections, and now it was proposed to make eleven, and he could not see how so much work was to be got through in addition to the ordinary business of the Society in two or three days. He moved the postponement of the consideration of this subject until the next meeting of the Society.

Dr. Long thought the Society was likely to be led into error by requiring chairmen of each Section to make a report of the progress in his Section. He thought power should be given to the chairman and his assistants to select gentlemen to read papers on special subjects, and that only such papers as they thought most profitable and instructive should be presented to the Society, as by attempting to cover the whole field the proceedings would be made dull and monotonous. He thought a change should be made.

Dr. Hodges moved that further discussion be postponed until the 3 o'clock session to-morrow, by which time the members will have had time to inform themselves of the nature of the change.

Dr. Hodges' motion was carried and the discussion made a special order for to-morrow afternoon at 3 o'clock.

The President remarked that there were several gentlemen in the hall from different States and the Society would be glad to listen to any remarks they might have to offer, either now or at any time during the session.

Dr. Hodges conveyed the invitation extended by the Fayetteville Library and the Young Men's Christian Association to the members of the North Carolina Medical Society to make use of their rooms as much as they desired; also the invitations of Col. Green to visit Tokay Vineyard, and of G. W. Lawrence to visit Happy Valley Vineyard, where they would be very welcome.

The Committee on Credentials reported as follows: W. W. Covington, Rockingham; J. G. Brodnax, Greensborough; James Spicer, Goldsborough; Augustus R. Zollicoffer, Weldon. Accepted and adopted.

The Board of Examiners reported the following candidates as having successfully passed: Drs. Isaac M. Lynn, Earpsborough; George R. Hughes, Snow Hill; Preston B. Loftin, Hookerton; Aaron McD. Moore (col.), Rosindale, Columbus county.

SECOND DAY—Afternoon Session.

Conjoint Session with North Carolina Board of Health.

The Medical Society of North Carolina and the State Board of Health went into conjoint session.

Dr. Thomas F. Wood made a motion to call Dr. R. H. Lewis to the Chair in the absence of the President of the Board of Health, Dr. J. W. Jones. Carried.

The report of the Secretary of the Board of Health was presented by Dr. Thomas F. Wood, as follows:

SYNOPSIS OF WORK DONE FOR 1887-1888.

Report from Thomas F. Wood, M.D., Secretary of the North Carolina Board of Health.

The work of the Board is still confined to elementary principles. It was recognized at an early day that eventual success must be based upon the spread of the knowledge of hygienic principles, and without this foundation no considerable superstructure could be built.

Mortuary Reports from Towns.—No better instance of the slowness of sanitary teaching need be cited than that of the returns from our towns. Wilmington was for a long time the only one reporting, and

it is interesting to recall how critically the reports from that town were commented upon by newspapers in non-reporting towns. The disadvantage seems to be enough at times to induce the Superintendent of Health to give up the publication of them; but time has shown the wisdom of persistently giving to the public the actual state of mortality, both as regards the actual state of things it portrayed and as an example to the other towns of the State.

In November, 1886, we were enabled to publish in the *Bulletin of the North Carolina Board of Health* the mortality returns of four towns, viz: Wilmington, Charlotte, Asheville and Fayetteville, having begun probably in the order of date as named above. In the December report Raleigh was added to the list, but failing for the next three months to be reported. At the date of this report there are eleven towns reporting, viz: Wilmington, Charlotte, Asheville, Fayetteville, Raleigh, Durham, New Bern, Goldsborough, Henderson, Washington, Tarborough and Salisbury. The basis of these reports is the record of the keepers of cemeteries, received through the keepers themselves, or through the Mayor of the town, or Superintendent of Health, or whoever could be induced to give the statements. It is, then, believed that such reports may be relied upon as approximately correct, making some calculation for the irregular burials resorted to by the colored people and some whites who are driven to seek a spot of ground beyond the control of city authorities, in order to escape the cruel tax which the extravagant fashion of burial now imposes upon white and black, rich and poor. This has been gradually corrected in Wilmington, where a regularly organized burial place under a responsible keeper has been established, so diminishing the error.

Another source of error is also to be considered: In all towns there is a rivalry about the increase of population, and as we get farther away from the last census the temptation to estimate the population has been great in all the towns. Wilmington by the census of 1880 had 17,360, but now a new estimate has been placed upon it. Following a practice in some other States, the population is estimated upon the record of registered voters. Ascertaining the number of voters, this is multiplied by 5, which is believed to be approximately correct. The fallacies of this must be evident. For instance, the census preceding an election in which there was great excitement by reason of vital issues and thorough canvasses by good speakers, would be much larger than where there is generally apathy. The

tendency is to overestimate population, and it may be safely considered that the mortality reported is under, rather than over, the mark. The desire of the Board is to agree upon some estimate of population and to impress upon authorities to see that no burials are permitted except upon the certificate of some physician or duly authorized person.

One other source of inaccuracy may be noted in the diagnosis of causes of deaths. All physicians are not equally careful in making diagnoses or even equally competent. Sometimes they state merely the last cause of death. For instance, naming "convulsions" as the cause of death, when the real disease might be "hæmorrhage or "asthma," the "hæmorrhage" signifying really aneurysm of the aorta, the sac bursting into the trachea. The most common cause is probably the post-mortem diagnoses, which are made by Superintendents of Health. In few cases have they the time, or are they encouraged by the prospect of a fee to make a thorough post-mortem dissection, to ascertain the cause, perhaps, in none other cases than such as are ordered by the coroner. The Superintendent, therefore, has to rely many times upon the narration of symptoms gathered from ignorant friends. The rectification of the above errors we must strive for, the ascertainment of truth being the desirable thing, and not the purpose of making one town more healthful than another.

The number of counties reporting has increased from forty-two in our April, 1887, *Bulletin*, to fifty-eight in our January, 1888, *Bulletin*, and the number is slowly increasing. The character of the reports need not be commented on here, but the desire on the part of most Superintendents is to do better, their success depending very largely upon the unanimity and intelligence of physicians in the different counties.

Epidemics.—During the past year no considerable serious epidemics have happened. In Wilmington *scarlet fever*, which had lingered as a sporadic disease for a few years, finally gathered force enough to be considered epidemic; although there were hundreds of cases, there were not to exceed a dozen deaths from this cause.

Measles was unusually widespread in the eastern counties, especially Columbus and New Hanover, but even the remote causes of death made the mortality below the average in this disease.

Cerebro-Spinal Meningitis.—After an exemption of nearly twenty

years quite a sharp outburst of this disease occurred in Buncombe, principally in Asheville, claiming the usual number of victims. It occurred also in scattered cases in other counties of the west, but not in an epidemic form. We are hoping to get a thorough investigation of the causes of the outbreak, as this disease may be fairly considered a preventable one.

Small-Pox.—The whole country was on the lookout for this disease this year, and the Conference of State Boards of Health agreed upon a notification of the occurrence of cases to each board represented in the Conference. The State of California made the first report, then Louisiana, then Kansas, then Tennessee, then Maine, then Pennsylvania, then North Carolina, and so on in pretty quick succession, the port of New York being the source of importation in most of the cases.

In March Dr. James Spicer reported by telegram that a case of small-pox had broken out, asking for vaccine to be sent. This was done immediately. We were then informed that the patient was a foreigner, who had come to work recently in a furniture factory in Goldsborough, and who had come in contact with fellow-workmen and boarders. The case was removed from town, and vaccination resorted to. The promptness of action was rewarded by the restriction of the disease to this one case. April 11th being the 14th day from the outbreak and the possible contact of persons with the sick man, and for the next few days there being no occurrence of another, all anxiety passed away.

Here is a note from Dr. M. E. Robinson giving an account of the case :

“GOLDSBOROUGH, N. C., April 21, 1888.

“THOMAS F. WOOD, M.D. :

“*Dear Doctor*.:—One Thomas Read, of Scotch descent, shipped from Glasgow on the 23d February last on steamer *Circassia*, which he says had a case of small-pox on board which died. They arrived at New York and were quarantined for only nine hours, and were all vaccinated and let loose on the country. I was called to see him on March 26th. On the 27th he broke out with an eruption which looked very suspicious. I called in Dr. Cobb. On the 28th called in Dr. Kirby. At first visit we thought it was measles, that is, on the 27th; on 28th pronounced it small-pox, and at once quarantined

it. He is now about well—able to keep up and about the house. We have been fortunate not to have another case.

“Very respectfully,

M. E. ROBINSON.”

The epidemic fund of the Board, held in reserve for the emergency of an epidemic outbreak has never been drawn upon, but is sufficient for all purposes. It is under the control of the Governor. The State Board, though, does not hesitate to send means of prevention with all dispatch to localities where it is needed. Vaccine we keep constantly within reach in a fresh state, but the Board does not attempt to furnish it gratis, as no provision is made for it. There is a provision for it in the general law making the expense in emergency devolve upon the officials of counties.

Hygienic Instruction.—The Board has secured for distribution copies of the Lomb prize essays on “Healthy Homes and Foods for the Working Classes,” “The Sanitary Conditions and Necessities of School Houses and School-Life,” “Disinfection and Individual Prophylaxis Against Infectious Diseases,” “The Preventable Causes of Disease, Injury and Death in American Manufactories and Workshops, and the best Means and Appliances for Preventing and Avoiding Them,” considering these contributions the best upon the subjects attempted. They desire to present copies to the principals of schools and other teachers having charge of the instruction of children. The introduction of books on hygienics, even in our higher grade of schools, has numerous difficulties, and I believe that the most effectual way is to educate teachers thoroughly, so that they may give instruction at opportune times on the various topics considered, according to the circumstances, most needed. It would be highly conducive to this end if the Board be represented at the Teacher’s Assemblies by some one of our number competent to bring these objects practically before them.

Penitentiary Convicts.—During the year reports had been made monthly to the President of this Board by Dr. James W. McGee, physician to the Penitentiary, and such suggestions from time to time are made as seem to be indicated. The Board of Health has worked harmoniously with the authorities in this matter, and we trust with advantage to the State.

Insane Asylums.—During the year a committee visited the

Western Insane Asylum, at the request of the Board of Directors of that Institution, and their report is on file. An invitation has been extended the Board to visit the Eastern Asylum for the Insane at Goldsborough. For the first time in the history of the Board the management of all the public institutions have shown their appreciation of the work of the Board of Health, and have asked their inspections and counsel based thereon.

Improvement in County Public Buildings.—Since the beginning of the publication of the *Bulletin* (1886) the most noteworthy fact has been the improvement in the condition of jails and poor-houses. We have endeavored to get such inspections and secure such reports as would give the public proper information about the condition of the prisoners and wards of the counties. This has been the burden of our endeavors from the inauguration of the Board, and, while we do not claim that all of these improvements have been brought about by the efforts of the Board, we are satisfied that what has been done has reached the ear and consciences of the public in a proper way, and that much of this fruitful result is due to our endeavor.

Executive Power Ought to be Bestowed upon the Board in Certain Cases.—The attitude of the State and County Boards of Health is advisory. In all the work done by either, these bodies must wait to be consulted by county or State authorities, or give advice gratuitously. In the latter case the Boards have been obliged to depend upon the force of public opinion to reach the constituted authorities, or if the public feeling were apathetic, see such advice meet the fate of all gratuitous advice—rejected and contemned. Some little executive power can sometimes be exerted when the Superintendent of Health works in concert with municipal authority, in enforcing health ordinances already framed by towns and cities, but this is only secondary, and the judgment of an educated Superintendent of Health can be disregarded or opposed by a municipal officer, and place the Board of Health in the attitude of indifference. There are certain conditions where the Board of Health should be clothed with executive power, and these conditions should be carefully studied and incorporated in a bill to be presented to the Legislature, after having been carefully put in legal shape by a good lawyer. There are times when the authority of the Board of Health of counties should be supreme. There are

times of public danger when none can be found at their posts but the few sentinels, too humble when the security of health reigns to be clothed with authority, but too valuable to be treated with indifference—men who are not afraid “for the pestilence that walketh in darkness, nor for the destruction that wasteth at noonday.”—*Psalm xci*, 6.

Dr. Thomas F. Wood then read a paper on the “Preliminary Study of Causes of Death in North Carolina, and some Suggestions as to the Future of Prevention.”

Dr. Satchwell said he had listened with great pleasure to the report of the Secretary to the Board of Health. He considered it was of great value and should be spread broadcast over North Carolina, so that all authorities of schools and colleges and municipalities and our coming legislators might read it. He thought no paper of greater importance had been read before the session, and he would like to see it published in such a form that it would be a sort of hand-book. Referred to the Committee on Publication.

Dr. Thomas F. Wood remarked that Dr. Jones, the President of the Board, had been detained by sickness in his family. Dr. Jones had sent his report, but he would not now undertake to read it. He moved that it be referred to the Committee on Publication, which was carried.

Contamination of Foods with Metallic Poison.

Dr. F. P. Venable read a paper on the “Contamination of Foods with Metallic Poison,” which was referred to the Committee on Publication.

The next thing, according to the order of business, was a paper by Dr. Bahnson on the “Water Supply to North Carolina Towns.” Dr. Bahnson regretted that his paper was not quite ready, but if the Board would allow him he would complete it and send it in to the Secretary of the Board of Health, to be incorporated in the biennial report of the Board of Health.

There being no further business, the conjoint session adjourned at 4 : 30 P. M.

NOTE.—The business details of the Board of Health are conducted at their regular annual sessions.

The Medical Society was then called to order again by the President.

Report of the Section on Gynecology and Obstetrics.

Dr. S. T. Nicholson read the report of the Section on Obstetrics and Gynecology. Referred to the Committee on Publication.

Professors Arnold and Miles Invited to Seats.

Dr. R. H. Lewis moved that Drs. A. B. Arnold and F. T. Miles, of Baltimore, be invited to take part in the discussions.

Early Treatment of Nasal Polypi.

Dr. K. P. Battle read a paper on the "Early Treatment of Nasal Polypi.

Dr. J. A. White's Nasal Speculum.

Dr. White, of Richmond, Va., exhibited and explained a little instrument of his own invention for making interior investigation of the nose; also an instrument, likewise of his own invention, for removing nasal polypi by electricity.

Dr. Carr moved that Dr. K. P. Battle's paper be referred to the Committee on Publication. Carried.

Dr. Thomas made a report of the Committee on Credentials, which was received and adopted.

Mr. J. L. Ludlow, New Member of Board of Health, Invited to a Seat.

Dr. Bahnson moved that Mr. J. L. Ludlow, member of Board of Health, be invited to a seat among the members, and also Dr. Jordan, of South Carolina, who had come up with Dr. Kollock, be asked to sit in the meeting and participate in its discussions, which was carried.

Aneurysm of the Aorta.

Dr. Oscar J. Coskery, of Baltimore, read a paper on "Aneurysm of the Arch of the Aorta," diagnosed through the nervous symptoms, and exhibited a specimen.

On motion of Dr. Carr the paper was referred to the Committee on Publication.

Dr. J. H. Way read a paper on "Laparotomy for Intestinal Obstruction," which, on motion of Dr. Patterson, was referred to the Publication Committee.

A Remarkable Case of Labor.

Dr. Paul B. Barringer: In the fall of 1886 I was hurriedly summoned to meet in consultation Drs. J. R. McClellan and S. W. Stephenson, of Mooresville, N. C., in the case of Mrs. H., aged about 45, then in labor. Upon my arrival I found a woman apparently much older than this, pale, emaciated and almost as bloodless as a marble statue. Upon inquiry, I learned the following history: Mrs. H., the mother of a large family, had been an invalid for several years. For the past year she had scarcely left her bed. She conceived in this precarious condition, and upon an invalid's bed went on to her confinement. At the time of the earthquake, some two months previous, she became insane, and had scarcely recovered her mind when her confinement came on. Dr. Stephenson, the family physician, was summoned, and upon early examination found a placenta-prævia. Appreciating the gravity of such a complication, in such a case, he boldly loosened and brought down laterally one side of the disk of the placenta, when the presenting part pressed it firmly against the ischial plane and all hemorrhage ceased. I was astounded at the extremely small quantity of blood lost. It could hardly have been two ounces, and I feel certain that, had any more been lost, she would not have been alive when I saw her. Her blanched and ghastly appearance was the result of previous illness and suffering. Upon further examination we found a presenting breech, and, as if enough were not present to jeopardize life, a six-inch loop of prolapsed cord. Gentle attempts at replacement were unavailing, but sufficiently disturbed our placental impaction to let us know that we must desist. The knee-chest position being impossible in her condition, we simply brought the cord around to where it would receive only the pressure of the soft placental mass. The pulsations of the cord were extremely feeble, if present at all. In the meantime the uterine contractions, feeble from the first, began to flag, and finally ceased. Ergot, pushed to its full capacity, was of no avail, and the patient, in spite of hypodermic stimulants, looked as if she would die at any moment. It was then determined to try and hook the blades of a pair of long forceps over the iliac

crest on either side of the foetal pelvis and thus deliver. After much trouble they were placed in position, and, with a tight grip on the handles, traction was made. As feared, the forceps slipped off, but not until the breech had been brought down so that we could engage a finger in each groin of the child. By a strong pull the body was delivered, and we thought that, in spite of all, we would get them through safely. But there was another trouble yet in store. As the head appeared to be grasped by the os, after reasonable traction on the neck I passed my arm up and got my finger in the child's mouth. After a long, strong pull, that I hoped would, as in previous cases, exhaust the constricting os, failed, I called for help. No time was to be lost, as the mother was about to die, and what little chance of life was left was with the child. With my right forefingers in the child's mouth, my left hand astride its neck, and Drs. Stephenson and McClellan each at an arm and leg, we with our united strength failed to budge it. No doubt many of you, calmly hearing this report, can imagine what was the matter, but put yourselves in our place, and think if, after the various complications already seen, you would not have been at a loss to account for this last *contre-temps*. We knew something was the matter, and, but for the size of the child, I would have thought it a case of twins with an impeding arm or leg. But my finger, sweeping around the strait, could feel no impediment, and yet I knew that no uterine fibres, as weakened as in this case, could withstand that strong and steady pull. Withdrawing my finger from the mouth, where the inferior maxilla hung, like a pendant cord, from the stain, I passed my hand with great difficulty up over the child's face, and as far as I could go it was free. I then knew that we had to deal with an immense hydro-cephalæ. Withdrawing my arm, I turned it, palm up, in the pelvis, and catching the base of the skull between my fingers and thumb, I crushed in the temporo-sphenoidal arch with ease. Gliding the back of my hand over the soft, doughy placenta, I crushed the occipital and withdrew my hand. Gentle traction now delivered the child's head—and such a head! The placenta was now delivered instantly and the uterus contracted nicely. There was no “wasting.” Renewed attention was now given to the mother. Under increased stimulation she seemed to rally for a time, but ere long her heart began to fail, and in a little over a half hour after the delivery of the child's head she died.

This case, in the variety and severity of its complications, exceeds anything of which I have ever heard or have seen record of. I thought it my duty to report it, which I do with the consent of the physicians in charge. We afterwards examined the head of the child. In its crushed, collapsed condition, it seemed more like a bag than a head. Its measured parieto-mental circumference was over 27 inches, while its fronto-occipital was $26\frac{1}{2}$. One of the most remarkable features of the case was the small amount of blood lost. I have seen but few cases in which there was less—it could not have been five ounces. There was a remarkably roomy pelvis, and yet it could not be expected to pass such a head as that. Retrospectively I may say that there was no reason, in spite of all complications, for this woman to have died, other than her previous condition of debility. While it sounds long, each step in the management of the case was made with promptitude and energy. She almost lived—and if this report will enable any professional brother to guide such a case, under more favorable circumstances, to a safe termination, it will not have been made in vain.

Delivery by the Rectum.

Dr. W. C. Galloway said: A somewhat similar case to that mentioned by Dr. Barringer has occurred to my mind. I was called to see a case one morning. An old midwife had been there two days. When I went to make an examination my finger ran into the rectum, a thing which had never occurred with me before. I went on with the examination, and in running my finger around I noticed a very hard ring. The head projected about as large as a walnut and could not be propelled any further. The expulsive pains were normal, but the woman was exhausted, and I asked the old midwife how long that hard ring had been round there, and she replied about eight or ten hours. I asked if she thought the child could be delivered in that condition. She did not know. I thought it could not. The woman had been delivered previously. I found a vaginal fistula, and in running my finger in the vagina I found I could slip it right within the anus. I told the midwife I would have to bring the woman to the side of the bed and perform an operation. I slipped in my finger and cut a few of the fibres of that hard ring, as nothing could be done without it, and then waited for the labor pains to do the rest of the work. Presently the head began to come

down and the soft part gave way, but that head was determined to go out of the anus; I could not make it go out by the regular track. The child, which was unfortunately dead, actually did come out through the anus. The woman afterwards got along nicely, and has never had any trouble excepting the fistula, which were there. That was the biggest anus I have ever seen, and I have stretched a good many for piles.

Dr. Hodges mentioned that Dr. Ferguson delivered a similar case last year through the anus.

Report of Committee in the Gallagher Case.

Dr. Long read the report of the special committee appointed to investigate the right of Dr. J. M. Gallagher, of Washington, to practice, recommending that his name be stricken from the rolls of the Society, he having obtained entrance by false pretences. The Committee had received verbal evidence since meeting which satisfied them that J. M. Gallagher was not eligible to membership, but to put the matter beyond question they had telegraphed to the Dean of the Faculty of the University of New York whether such a person had graduated there or not, and had received the reply that no J. M. Gallagher had graduated at that University, but that a J. A. Gallagher had graduated in 1858. The Committee therefore recommended that the name of J. M. Gallagher be struck from the roll.

Dr. Thomas F. Wood moved as an amendment that the words "Provided the said J. M. Gallagher does not come forward and make proper explanations at the next annual meeting" be added.

The motion was carried as amended.

Dr. Thomas read the report of the Committee on Credentials. Carried.

Laparotomy.

Dr. Cornelius Kollock read "Some Particulars of Abdominal Section."

Dr. Michael, on invitation, said he had nothing to add to the remarks of Dr. Kollock, to which he had listened with a great deal of interest. He had treated the condition presented with a great deal of skill, and deserved the success he had met with. He had never seen such a tumor himself.

Dr. Patterson moved that Dr. Kollock's paper be referred to the Committee on Publication. Carried.

Report of Committee on Pittman Prize.

Dr. R. H. Lewis reported that no award had been made, as none of the papers came up to the standard. It was the express injunction of Dr. Pittman that a high standard be maintained, and that no award be made unless such standard be reached.

Dr. Thomas F. Wood expressed his appreciation of the courage of the Committee in their endeavor to maintain a high standard of excellence, which he thought was very desirable in the interest of the Society.

To Form a Microscopical Society.

Dr. Barringer gave notice of a meeting in Parlor 4 of the Hotel to form the nucleus of a Microscopical Society for North Carolina, and hoped all interested in such an object would be present; the meeting would take place immediately after the adjournment.

The Society then adjourned till Thursday morning at 9 o'clock.

THIRD DAY—Morning Session.

The Society was called to order at 9 : 45 by Dr. Ennett, the Vice-President.

The proceedings were opened with a prayer by Rev. A. L. Phillips, of the First Presbyterian church.

Dr. J. A. Reagan presented an invitation from the Buncombe Medical Society to the Medical Society of North Carolina to hold its next annual meeting there.

Dr. Payne read a paper on "Viburnum Prunifolium."

Dr. Thomas F. Wood asked if Dr. Payne thought the sedative properties were due to valerianic acid.

Dr. Payne thought they were not, and that they were due to a principle of which we know nothing. An alkaloid had been separated called "viburnin," to which it was probably due.

Dr. Thomas F. Wood said that Dr. Payne was doing what he (Dr. W.) had been for some time trying, through the JOURNAL, to get the young men to do—to take a remedy whose properties were not well known and make experiments on the lower order of animals, and so arrive at fixed principles about its use, and either strike them entirely from the materia medica or establish them on a firmer basis. Several of these native remedies remained to be examined, and Dr. Payne, he thought, had already undertaken the examination of two or three of them. He was highly gratified at the new departure from the old methods, and sincerely desired the Society to return a vote of thanks to Dr. Payne, and that his paper be referred to the Publication Committee in the usual order, which was agreed to.

Dr. Thomas read a report of the Committee on Credentials, which was accepted.

Necessity for Obituary Records.

Dr. Satchwell said no one knew better than himself that the Society had a bright and prosperous future before it, but he also knew that it had a sacred past to cherish, and, as chairman of the Obituary Committee, he had a report to make with reference to the death of several members. He would not detain the Society now by reading the report—he merely desired that it should be brought before the public through the Society. He desired to ask the members to forward him particulars of the deaths of any members that might happen in order that due record might be made of them.

Resolution of Sympathy for Dr. G. G. Smith.

Dr. Anderson, of Statesville, moved a resolution of condolence with Dr. G. G. Smith, of Concord, in his present sickness.

Dr. R. H. Lewis, in seconding the resolution, said he did not know of any member of the Society who would be so much missed. It was with sincere regret that he heard of Dr. Smith's illness, and he hoped he would soon be restored to health.

Codification of the By-Laws, etc.

Dr. Bahnson said that, with respect to the codification of the By-Laws, etc., it would require so much work to prepare a report for this meeting that the Committee had decided to ask the Society

to empower the Secretary to codify, with such assistance as the Committee is willing to render, the laws, resolutions, etc., for publication, if possible, with this year's "Transactions," and in any event to have struck off an edition of 500 or 1,000 copies for distribution among the members and to applicants who frequently ask for such By-Laws. Accepted and adopted.

Dr. Foote read the report of the Committee on the President's Address, and also moved a resolution in regard to the death of Dr. Manson, of Richmond, which was received and adopted.

Invitation to Attend Memorial Services.

Dr. Hodges presented an invitation from the ladies of Memorial Society to the members of the Medical Society to be present at the memorial services in the hall at 4 : 30. Accepted.

Continued Fevers.

Dr. Carr read a paper on "Continued Fevers and What we should Call Them."

Dr. Pierce asked if Dr. Carr employed quinine in heroic doses at the beginning of the disease.

Dr. Carr replied that he had given 30 grains three times a day.

Dr. Pierce said there was a physician in his town who said he would warrant to bring such a fever to a favorable termination in four or five days by heroic doses of quinine. He gives from 60 to 100 grains a day, and in three days he says he can get it perfectly under his control. He himself had used quinine in moderate doses, and it took him usually two or three weeks to reduce the fever.

Dr. Carr believed, from the cases he had read in the JOURNAL, that this fever was not always recognized. He believed that for the first two or three days it was impossible to tell what the fever was.

Dr. Satchwell said that, from an experience of over thirty years, he could endorse the excellent paper of Dr. Carr, and he thanked him for the independent position he had taken as a young and rising man, and for the way in which he had spoken out that morning. In his experience there was such a mongrel fever. We have typhoid fever and typho-malarial fever.

Dr. Carr's paper was referred to the Committee on Publication.

Dr. Long said he understood that Dr. Arnold, of Baltimore, had

a paper on nervous dyspepsia, and moved that he be invited to read it.

Dr. Arnold, on being invited by the Society, read his paper on "Nervous Dyspepsia."

Dr. Pierce said he was gratified to have heard the symptoms so lucidly explained by Dr. Arnold; he believed that there were many such cases, and had in his mind's eye a brother physician who was suffering in the way described. He moved that the paper be referred to the Committee on Publication. Carried.

Dr. Thomas F. Wood said he understood that Prof. Miles had considerable experience in the treatment of chloroform narcosis, and the Society would be glad to have him give it the benefit of his experience.

Prof. Miles on Sudden Death from Chloroform.

Prof. Miles said: There are few things which can interest us more than the sudden stoppage of the heart. The old stories in novels about a man dying suddenly of apoplexy are founded on a mistake; it is stoppage of the heart which produces death immediately. There has been a growing terror of the stoppage of the heart's action from the administration of chloroform. As I am strongly in favor of the administration of chloroform, I have taken considerable interest in the mode by which resuscitation is brought about. Years ago Nélaton, in France, discovered that in animals which had been brought to a condition of apparent death from chloroform, hanging by the tail was the most efficient means of restoring circulation, respiration, etc., and at the present day I think it is generally conceded that the complete and sudden inversion of the position of a patient is the most effective way in which we can bring about resuscitation. Prof. Chisolm has given some most remarkable examples of operations in which resuscitation had to be performed several times, and never failed to be successful, by the inversion of the patient, and I have seen him hold up a small child by the legs for that purpose, while at the same time he exhibited the results of an operation. Now, that is the practical part, but I do not think that North Carolina physicians will stop at the practical part; they want to know the reason for things. Now, what is the reason of this resuscitation? The first idea, and one which I think is generally expressed by almost everybody, is that you bring the blood back to the brain and stimulate the brain-centres, but that is very unsatisfactory. In the second place, what is the blood which you

would pour back into the brain? It is venous blood. But venous blood is not the sort wanted—it is arterial blood, and the arterial blood which would be poured into the brain would be very small. But it might be said you stimulate the respiratory centre, which is normally stimulated by venous blood. Moreover, what is it that threatens death in the use of anesthetics? I take it to be the stoppage of the heart; that is the thing, and not the respiratory movement, which we wish to establish. When the venous blood pours towards the brain it induces stasis. Now, what in the nervous system teaches us that the most sudden way to stop the activity of any centre is the stoppage of the circulation? This pouring of venous blood into the brain seems to me most unsatisfactory. Besides, we know of no centre in the medulla oblongata for exciting the heart's action. What is the condition of the heart? We do not know. I am trying to think it is the condition which we bring about in inhibition. It is not a passive condition of the centre of circulation, nor is it a condition of paralysis. It has come to a standstill in a condition of inhibition. How does this inverted condition of the body act? Observe that we have the heart lying as in this diagram (shown on the blackboard), and right below we have the liver. The liver is computed roughly to contain about one-quarter of the blood in a man's body. The channels which lead from the liver to the diaphragm are kept open by an attachment which cannot collapse—they are open, they cannot fall together. Now, when you invert the position of the patient you pour the blood from the liver directly into the right ventricle. Now, what do we know about the heart of an animal outside the body. One of the most certain ways to excite that heart to action is to pour blood into it. Mechanical irritation of the blood in the interior chambers of the heart produces that excitement, I believe, which we establish in the heart by inverting. That is my theory, and I think it might be elaborated much more than I would presume upon your patience to try and do here.

I remember the case of one patient where the heart had stopped. I could not, by putting my ear to the chest, detect any beat whatever, and a deathly pallor had spread over the features. I had no assistant to aid me in reversing the patient, a heavy woman, and I struck with the palm of my hand over the region of the heart with a marked degree of violence, and the heart commenced beating and the patient revived. I cannot but think that the strong concussion

to the chest gave the first impulse, as when a frog's heart stops beating you can stop it again for a short time by a slight knock.

Dr. Barringer said that two years ago he was in South Carolina with another doctor on professional business, and a boy about fourteen years of age was brought to them by his father to ask if anything could be done with him. They found a tumor on the right side of the neck about $1\frac{1}{2}$ inches from the clavicle. A small needle introduced brought out arterial blood. The boy was weak, bloodless and exhausted and almost dead. His respiration was weak and sighing. They knew the boy was going to die, and, although they were not prepared for an operation, they decided to undertake it. About a drachm of chloroform was put on the patient's nose, and he drew one whiff and died. Inversion, artificial respiration and everything else that could be done had no effect, and he is dead yet. The boy's heart stopped first and he breathed for sometime afterwards. About six months after that he began some experiments with dogs, and, after a dozen trials, he could safely say that a dog whose heart has not stopped can be resuscitated by the following procedure, which can be used in any case: I have an ordinary needle, about the size of a knitting-needle, which I isolate to about one-fourth inch from the point with a trocar. The apex of the heart is determined, the trocar is passed to the heart, and the needle, on occasion, is used to stimulate the pulseless organ.*

Dr. Michael mentioned a case in which a patient took two whiffs of chloroform and died before he at all came under its influence. He thought that in this case, as in the one related by Dr. Barringer death resulted from heart paralysis. He believed that the explanation of Prof. Miles as to the manner in which inversion brings about the reëstablishment of the heart's action is the most reasonable and probably the correct one. He had had a case in the hospital where a patient had taken chloroform without any ill effect, and a week later died under its influence. He had never seen or heard of a case in which the heart ceased to beat and the respiration went on afterwards in which there was a restoration to life. There were, however, very few cases in which the heart stopped in this manner, and he believed that it was due to some idiosyncrasy in the patient. So far as he knew, when the heart stopped in the manner

*The above few lines not given by stenographer.

described it never goes again. We may discover some method by which it may be started into action, but he had no confidence in any method at present.

Prof. Miles thought it probable that these sudden deaths were caused by heart disease, and it was only accidental that they occurred while under the influence of chloroform. He knew a case where a patient was about to be put under chloroform, and it was afterwards decided not to do so, and the patient died just when the knife was about to be used.

Dr. Carr believed that these cases of sudden death were due to fright.

Dr. Cheatham had two cases where restoration was very difficult, which he attributed to fright. He had never seen a child suffer from that sudden stoppage of the heart and in his opinion it was because they took it kindly and were not afraid of it.

Dr. Barringer asked if he had ever had a woman ask for chloroform in cases of child-birth.

Dr. Cheatham said he had frequently, and not one of them had ever suffered any ill effects from it, which he considered a confirmation of his belief that the stoppage was due to fright.

Dr. Michael pointed out that people have taken chloroform with perfect impunity, and yet on taking it another time, having no fear, as they were aware of the sensation, they had died, which he thought disposed of the theory that the cause of death was fright.

The President expressed the thanks of the Society to Prof. Miles for introducing the subject.

Prof. White read a paper on "The Nose."

Dr. Galloway moved a vote of thanks to Dr. White for his very complete paper, and that it be referred to the Committee on Publication. Carried.

Dr. Long moved that the stenographer be paid the sum of \$25 for his services. Carried.

Dr. Thomas read the report of the Committee on Credentials, which was accepted.

Cases of Phlegmasia Dolens.

Dr. Foote reported two cases of phlegmasia dolens which appeared in one case after eight weeks had elapsed since child-birth, and in the other case a rather longer period had intervened. The

remarkable feature in the two cases was the interval, after the completion of the puerperium, at which the disease had shown itself. His diagnosis was sustained by Dr. Arnold, of Baltimore.

Report of Board of Examiners.

The Board of Examiners reported the following successful candidates ; Drs. B. T. Cox, Greenville; A. Cheatham, Henderson; A. S. Harrison, Ringwood; E. H. McCullen, Johnston county; T. T. Ferree, Brown Summit; H. L. Alexander, Davidson county; L. A. Morris, (?) Smithfield; Jenness Morrill, Farmville; W. C. Martin, East Bend; Giles Lucas, East Bend; J. W. Caveness, Greensborough; E. B. Goelett, Brevard.

The meeting then adjourned till 3 o'clock P. M.

THIRD DAY—Afternoon Session.

Dr. R. H. Lewis said that Dr. Way had been called home, and he moved that his paper, which was his report as Chairman of the Section on Materia Medica, be referred to the Committee on Publication without being read. Carried.

Discussion on Reorganization of the Society.

Dr. Barringer read the report of the Committee on alteration of the organization of the Society. (See report.)

Dr. Lewis said it was a subject of great importance, and it seemed to him that the objection to the change arose from the fact that the Society was one of the most conservative bodies in the world, and he was proud of it. They always looked well to any change for fear it should be for the worse and not for the better. But this change did not seem to be so radical as that proposed last year; it did not seem to interfere with the regular order of business, but to make it more effective. He hoped, however, that it would be thoroughly sifted before any decision was come to.

Dr. Pierce thought it was a matter of very great importance, and should receive serious consideration. There were three important points to be considered : First, would this innovation simplify the business or not? Second, will it diversify the business? Third,

will it prove more efficient? We had already changed from the old track with regard to devoting a part of the time of the Society to written communications apart from discussions, and had already formed seven Sections, and what was the result? We have had upon several occasions the whole time of the Society taken up with long discussions upon the history of the medical literature of the country. If you want to read the medical literature of the country, he referred you to Pepper's "System of Medicine," and to others, and to the journals of the day; but the Society was formed for bringing out the experience of the members, of hearing what they had seen and learned during the time intervening between the meetings, and he asked if the changes proposed would make this more effectual. These were the points he thought should be considered.

Dr. R. H. Lewis, in reply to Dr. Pierce's questions said, in the first place, that he did not think it would simplify the work, as there would be eleven Sections instead of seven. but he certainly thought that the increase of the number of Sections would diversify the proceedings just that much. To the third question, as to whether it would make the work more effective, he thought it would, because there would be more work done, and he believed it would aid in energising the Society. While the system is rather elaborate, he could think of none better, and he was heartily in favor of giving it a trial, and if not satisfactory, it would be easy to return to the old routine.

Dr. Thomas said he had several years experience as a member of the Committee on Publication, and knew whereof he spoke when he said the work of the Sections had been very often poorly done. It had been a rather unpleasant task, sometimes, to turn down papers and the work of many weary hours. The Committee of Enquiry would do away with a deal of work which ought not to come before the Society. He thought one complete answer to Dr. Pierce was that the plan was the most complete organization that had ever been proposed, and though it was rather cumbersome, he was willing to give it his hearty support, and hoped it would receive the support of all the members.

Dr. Ennett said: There is one advantage that has not been mentioned yet, and that is that there were a number of young men in the Society who had never spoken at any of the meetings. They were bashful and young, but if selected by a chairman of one of these committees to prepare a paper, he was sure they would be willing to defend that paper after reading it, and they would thus be brought into the

deliberations of the Society. He thought that on this account alone the change should be made.

Dr. Pierce did not think his questions had been answered. Would members attend to their duties better under the form proposed than under the present form? He thought discussion should be open to everybody and the members should be encouraged to relate anything of interest coming within their experience during the intervals between the annual meetings, so that, instead of having half a dozen or a dozen long, papers, they would have a number of shorter papers of interest to every member.

Dr. Barringer said: The framers of the proposed change, having only human foresight, could not say for certain that it would be better than the present system, but they could undoubtedly say that it would not be worse. Out of the six Sections the papers do not average two a year; we can guarantee that the proposed change will not do worse than that, and we can hope for something better.

The question was then put by the President and carried.

Report of Board of Censors.

Dr. G. W. Long submitted the following report of the Board of Censors:

The following question has been submitted to the Board of Censors, to wit: Has a doctor, a member of the State Medical Society, any right to put the word doctor in any public advertisement calling the attention of the public to his drugs, patent medicines, etc.?

Answer—Inasmuch as the selling or using of patent medicines is condemned and forbidden by the Code of Ethics of this Society, it is therefore in violation of the spirit of this Code for a physician, a member of the North Carolina Medical Society, intending to preserve a good standing in the profession, to prefix his professional title to any advertisement of drugs or medicines, as a dealer in these, which shall include the names of any such known nostrums.

P. B. BARRINGER, M.D.,
GEO. W. LONG, M.D.

On motion, the opinion of the Board of Censors was endorsed.

The meeting adjourned at 4 o'clock, in order that the hall might be prepared for the Memorial services at 4:30.

THIRD DAY—Evening Session.

Dr. Picöt moved that the paper of Dr. Booth, who had been suddenly called away by sickness in his family, be referred to the Committee on Publication. Carried.

The Case of Dr. Hyatt.

Dr. Poole called attention to the resolution at the previous meeting that Dr. Hyatt be permitted to reënter the Society, and desired to know if he was to charge him the arrears of \$6.00 and the initiation fee.

Dr. Bahnson moved that Dr. Hyatt be readmitted on paying the initiation fee of \$5.00. Dr. Hyatt had paid all dues up to the time of his resignation, and consequently could come in as a new member according to the Constitution and By-Laws.

Dr. Poole asked if it was fair to other members who had been dropped for being in arrears to allow Dr. Hyatt to reënter the Society without paying the \$6 00, as provided by the By-Laws.

Dr. Bahnson said that Dr. Hyatt's case was different. The By-Law referred to was only intended to apply to those who had not expressly resigned and who had continued to receive the "Transactions," etc.

Dr. R. H. Lewis said he understood that Dr. Hyatt had already been reinstated, and it was our mistake, and not Dr. Hyatt's fault, that no dues were exacted. He thought it might be explained to Dr. Hyatt that some of the members were rather sore that such an exception had been made in his case. He, however, was opposed to asking him for any money.

Dr. Jones said: When a man is reinstated he does not pay any initiation fee. If he owed any dues when he resigned he ought to pay them, but he was sure that Dr. Hyatt did not owe anything when he sent in his resignation, and did not see how he could owe anything now.

The Treasurer remarked that Dr. Bahnson had paid the fees due from Dr. Hyatt and that the matter was settled.

Dr. Pierce said that there were several members on the list who had not attended any of the meetings for the past ten or twelve years, and who had not paid their dues, and yet they continued to send them the "Transactions" of the Society. He thought that

when a member was three years in arrears and had not said anything about being reinstated, he should be dropped from the list.

The President explained that there were already By-Laws to that effect, and the Treasurer was empowered to act in the matter.

Dr. Thomas read a report from the Board of Examiners, which was accepted and adopted on motion of Dr. Bahnson.

Time and Place of Next Meeting.

Dr. Picôt moved that the place of meeting for the Society next year be selected, together with the time of meeting.

Dr. Lumsden extended an invitation to the Society to meet in Elizabeth City.

Dr. Anderson invited the Society to meet in Statesville.

Dr. Bahnson said he would second the invitation of his professional brother, Dr. Lumsden, that the Society meet in Elizabeth City. He said that their object was to gather in members and to excite an interest in the Society throughout the State, and the country around Elizabeth City was almost a *terra incognita*, which he thought it would be to their interest to visit.

Dr. Thomas, as one of the representatives of Wilmington, said it had been their pleasure, as well as their profit, to entertain the Society once in ten years. The Society was due in Wilmington in 1890, and he would like to ask if their going to Elizabeth City next year would be likely to interfere with their meeting in Wilmington the year following. If they would promise to go to Wilmington in 1890 he would vote in favor of going to Elizabeth City or any other place they liked next year.

Dr. Barringer said he did not see how they could go to Elizabeth City next year and to Wilmington the following year; that would be too much East. He thought either Statesville or Asheville should be chosen for the next meeting.

Dr. Foote thought the Society ought to meet at Elizabeth City, as it is much more accessible than Asheville.

Dr. Satchwell said he wished the Society could accept all the invitations, but they could only go to one place. For the past thirty-five years the Society had been travelling all over North Carolina, from the seaboard to the mountains, and it has been done principally with the object of getting in new members in the various localities. The Society had now, however, arrived at such a point that they

could get along without such efforts, and he proposed that a middle line be struck, and that the Society should stay nearer home. He thought that the Society should accept the invitation to go to Wilson, which was the first one received.

Dr. McDuffie said he was satisfied to stop itineracy and locate, and he proposed that the Society come to Fayetteville again. (Laughter and cheers.)

Dr. R. H. Lewis said he thought it would be better to meet in April than in May, at Elizabeth City, as the fishers hang up their nets on the 1st May, and the members would not have the pleasure of seeing them in operation after that date. The fisheries were very extensive and he thought the members would be very much interested in the operations.

Dr. Lumsden moved that the next annual meeting be held in Elizabeth City on the third Tuesday in April, 1889. Carried.

The Prize Essays.

Dr. Galloway regretted that no paper of sufficient merit had been presented to the committees on prize essays as to warrant the awarding of the prizes, and hoped that another year would see this blot upon the good name of this venerable and influential Society removed.

Installation of Officers.

Dr. Bahnson moved that the Society now proceed to the installation of officers for the coming year. Carried.

Dr. Bahnson and Dr. Carr were appointed to conduct the new President to the Chair.

The Retiring President's Remarks.

Dr. Haigh said: Gentlemen of the Medical Society of North Carolina: Before turning over the gavel to my successor I desire to thank you heartily for your kindness to me during the past year. It was one of the proudest moments of my life when I accepted the position as your President. During the whole year I have received nothing but kindness at the hands of the members, and if you all feel as I do this evening, you certainly have nothing to regret from the fact that you have met in Fayetteville and that we have had generally such a successful meeting. I now turn over the gavel to

my successor with pleasure, knowing that it will be in good hands and that the interests of the Society will not suffer.

The New President's Reply.

Dr. Ennett said : Gentlemen of the Medical Society : I accept the gavel with great thanks. I cannot expect, nor can you expect me to wield it as my worthy and honorable predecessor has done.

This, gentlemen, is the proudest day of my life. To be elected President of the North Carolina Medical Society at any time is a great honor—how much greater must it be at this time, when conferred by the largest body of medical men that have ever assembled in North Carolina—at the most interesting and profitable meeting ever held in North Carolina, and presided over by one of the best and most impartial Presidents we have ever had.

I had rather be President of the North Carolina Medical Society, to-day, than to hold any office in the gift of the whole people of North Carolina, and if you will aid me I will promise to leave nothing undone that will make the next meeting, if possible, better than the preceding one. Again, gentlemen, I thank you.

The Society will come to order.

Dr. Lloyd read a paper on Laparotomy, which was referred to the Committee on Publication.

Resolution of Thanks to the People of Fayetteville.

Dr. Poole moved the following resolution :

Resolved, That the thanks of this Society are due, and are hereby tendered, to the people of Fayetteville, and especially to the Carolina Club, the Library Committee, the Light Infantry, for the use of their Hall, the local physicians and various other individuals and organizations for the hospitalities shown us while in their midst.

Seconded by Dr. R. H. Lewis.

What the President Said.

The President remarked that the Society had never been treated better than in Fayetteville, and it was a pleasure to him to put that motion to the meeting. Carried.

Response.

Dr. Hodges : I rise in the name of the local faculty of this city to thank you in return for the courtesies you have shown and the

pleasure you have given us by your stay here. This brotherhood of physicians has wooed and won the hearts of the people of Fayetteville, and it has been a real, a genuine, a lasting pleasure to have you here with us. The visit of the Medical Society of North Carolina to Fayetteville will be one of our most cherished memories.

Microscopical Society.

Dr. Barringer said that the Microscopical Society had now about twenty members, which he thought was very satisfactory, but as they had not a full selection of instruments there would not be any exhibit to-night, as had been intended. If any one, however, would like to see what instruments they had, he would be very glad to show them.

Appointment of Essayist for Next Meeting.

The Committee appointed to select the Essayist for the next meeting selected Dr. R. F. Lewis, of Lumberton.

Chairmen of Sections.

The President read out the Chairmen of Sections, as appointed, as follows :

Practice—H. P. Murray, Plymouth.

Surgery—George F. Lucas, Point Caswell, Pender county.

Obstetrics—David Tayloe, Washington.

Gynecology—T. S. Burbank, Wilmington.

Microscopy—J. A. Hodges, Fayetteville.

Pathology—L. W. Battle, Asheville.

State Medicine—Kemp Battle, Jr., Raleigh.

Materia Medica—H. H. Dodson, Milton.

Therapeutics—Robert Young, Concord.

Anatomy and Physiology—P. B. Barringer, Davidson College.

Medical Jurisprudence—J. T. Nicholson, Bath.

The Secretary said he would send a copy of the Rules to each of the Chairmen of Sections so that they could appoint assistants, etc.

Selection of Leader in Debate for Next Meeting.

Dr. Haigh moved that the President appoint a leader in debate for the next annual meeting.

The President appointed Dr. McNeil, of Fayetteville.

Temporary Committee on Credentials.

Dr. R. H. Lewis moved that the President, the Secretary and the Treasurer be appointed as a Temporary Committee on Credentials.

The Secretary moved as an amendment that Drs. Hodges, Haigh and McDuffie be appointed a Temporary Committee on Credentials so long as the Board of Examiners were in session to receive all applicants who had obtained licenses. Carried as amended by the Secretary.

Dr. Henry Q. Alexander Passes the Best Examination.

Dr. W. J. H. Bellamy, Secretary of the Board of Medical Examiners, reports that Dr. H. Q. Alexander passed the best examination, and is entitled to the prize offered by Messrs. D. Appleton of New York.

List of New Members Admitted.

Dr. L. G. Broughton, Reidsville.

" J. A. Griffin, Godwin.

" J. B. Robertson, Clayton.

" J. B. Pearsall, Manchester.

" J. C. Grady, Seven Springs.

" J. A. Faison, Mt. Olive.

" Alexander McDonald, Cumberland Mills.

" C. W. Sawyer, Elizabeth City.

" W. J. James, Clayton.

" W. J. Lumsden, Elizabeth City.

" Thomas S. Burbank, Wilmington.

" George H. Maran, Morganton.

" N. B. Herring, Wilson.

" H. D. Lucas, Black Creek.

" James W. McGee, Jr., Raleigh.

" B. C. Moore, White's Store.

" Archibald McKinnon, Lumber Bridge.

" Duncan Smith, Athens.

" M. McL. Tatom, ———.

" S. A. Henley, Ashborough.

" H. O. Hyatt, Kinston.

" W. R. Monroe, Madison.

" H. B. Marriatt, Battleborough.

- Dr. C. B. Woodley, Stanton.
“ D. S. Ellis, Woodland.
“ W. B. Harrell, Dunn.
“ J. E. Brothers, Stantonsburg.
“ J. M. Belk, Marven.
“ W. S. Anderson, Wilson.
“ A. R. Zollicoffer, Weldon.
“ J. G. Broadnax, Greensborough.
“ Duncan Sinclair, Plainview.
“ J. E. Ashcroft, Monroe.
“ F. G. Merriweather, Asheville.
“ E. H. McCullers, Clayton.
“ C. H. Lewis, Farmer's.
“ E. B. Goelett, Brevard.
“ T. T. Ferree, Brown Summit.
“ B. T. Cox, Greenville.
“ A. Cheatham, Henderson.
“ A. S. Harrison, Ringwood.
“ James Morrill, Farmville.
“ James Spicer, Goldsborough.
“ Thomas Stamps, Milton.
“ J. H. Jenkins, Dallas.
“ A. S. Lott, Winston.

Adjournment Sine Die.

Dr. Foote moved that the Society do now adjourn, to meet in Elizabeth City the third Tuesday in April, 1889. Carried.

THE MINUTES OF THE NORTH CAROLINA BOARD OF
HEALTH AT THE REGULAR ANNUAL SESSION IN
FAYETTEVILLE, MAY 8-11, 1888.

FAYETTEVILLE, N. C., May 12, 1888.

- Present, Dr. R. H. Lewis, Raleigh ;
“ H. T. Bahnson, Salem ;
“ J. H. Tucker, Henderson ;
“ Thomas F. Wood, Wilmington.

Mr. J. L. Ludlow, C. E., appointed by the Governor to succeed Mr. Arthur Winslow, was present and took his place on the Board.

Dr. J. W. Jones, President, was absent, owing to sickness in his family.

Dr. John McDonald telegraphed that at the last moment he was deterred.

Prof. W. G. Simmons regretted his non-attendance, but by reason of his continued bad health he was obliged to forego the pleasure of attendance on this meeting.

Dr. W. D. Hilliard was also detained at home, and expressed his regrets.

Upon motion of Dr. R. H. Lewis, the Board requested the Secretary to express their sorrow because of the impaired health of Prof. W. G. Simmons, and to assure him of the deep sympathy of each member of the Board, with earnest desires that he would soon be so far restored as to take his place again with us—a place he had filled with so much ability and fidelity.

Dr. Bahnson and Mr. J. L. Ludlow were appointed to audit the accounts of the Treasurer, and finding them correct certified thereto.

The following assignments for the current year were made, but are subject to the wishes of the absent appointees.

Dr. H. T. Bahnson on "The Public Water Supply of the State."

Dr. J. H. Tucker on "The Registration of Births, Deaths and Marriages."

Dr. J. W. Jones on "Legislation Necessary for Obtaining Executive Authority for the County Superintendents of Health."

Dr. R. H. Lewis on "The Well Water Supply of the Eastern Counties."

Mr. J. L. Ludlow on "The Sewerage of Towns."

Dr. Jones and Dr. Lewis to attend the Teacher's Assembly at Morehead City, in June, in the interests of Hygienic Instruction in the Public Schools.

Dr. Bahnson and Dr. Wood to attend the meeting of the American Public Health Association, in Milwaukee, in the interests, specially, of the plans for "Cremation of Garbage in Towns," as well as all other subjects connected with the work of the Board.

Dr. W. D. Hilliard; will undertake the "Examination of the

Appearance of the Cerebro-Spinal Meningitis," with a view to determine the causes, if possible.

Dr. J. H. Tucker and Mr. J. L. Ludlow will visit the "Eastern Insane Asylum," sometime in June, to inspect the sanitary needs of that Institution, if any, and report in full to the Superintendent and Board of Directors of that Institution, preserving a duplicate for the Secretary of this Board.

THOMAS F. WOOD, M.D., Secretary.

REPORT OF THE BOARD OF MEDICAL EXAMINERS OF NORTH CAROLINA, WITH APPENDED RULES OF PROCEDURE.

WILMINGTON, N. C., May 22, 1888.

The Board of Medical Examiners of North Carolina met in Fayetteville May 5, 1888. The following members were present: William R. Wood, M.D., President, Examiner on Chemistry and Pharmacy; Francis Duffy, M.D., Examiner on Surgery and Diseases of the Eye and Ear; A. W. Knox, M.D., Examiner on Obstetrics and Diseases of Women and Children; James A. Reagan, M.D., Examiner on Physiology and Hygiene; P. L. Murphy, M.D., Examiner on Anatomy; Willis Alston, M.D., Examiner on Practice of Medicine; W. J. H. Bellamy, M.D., Secretary and Examiner on Materia Medica and Therapeutics.

The minutes of the last meeting in Charlotte, 1887, were read and approved.

It was resolved by the Board that, in the future, examinations of applicants shall be in writing, and the standard shall be 70 per cent. It was also resolved that all temporary licenses issued by the members of the Board shall be called in, and the editors of the NORTH CAROLINA MEDICAL JOURNAL are requested to urge upon parties holding temporary licenses to send them in without delay to the Secretary.

Drs. Murphy, Reagan and Knox were appointed a Committee on Rules to Govern the Method of Conducting Written Examinations. On motion of Dr. Duffy, all examinations for temporary license

shall be in writing and the examination papers be sent to the Secretary of the Board, who shall submit them to the Board at its next regular meeting. The Board may then, in its discretion, license the candidate permanently with or without reëxamination.

The Board continued in session at the Hotel La Fayette until the morning of the 12th inst., after having passed upon the qualifications of fifty-three applicants, thirty-six of whom were licensed, and the remaining seventeen were either rejected or allowed to withdraw. The following were licensed :

- Dr. Elma Travis (female), Raleigh.
- “ James W. McGee, Jr., “
- “ E. H. McCullers, Clayton.
- “ F. T. Merriweather, Asheville.
- “ J. G. Sherrill, Salisbury.
- “ A. E. Ledbetter, Jamestown.
- “ I. M. Lynn, Earpsborough.
- “ J. O. Walker, Randleman.
- “ P. B. Loftin, Hookerton.
- “ George R. Hughes, Snow Hill.
- “ B. T. Cox, Greenville.
- “ A. Cheatham, Henderson.
- “ A. S. Harrison, Ringwood.
- “ T. T. Ferree, Brown Summit.
- “ Edward B. Goelet, Brevard.
- “ L. A. Muns, Smithfield.
- “ Jenness Morrill, Farmville.
- “ Henry Q. Alexander, Davidson College.
- “ W. H. Martin, East Bend.
- “ Giles Lucas, Rone.
- “ I. W. Caveness, Greensborough.
- “ William F. Cherry, Tarborough.
- “ C. D. Wyche, Dabney.
- “ R. L. Gattis, Bellevoir.
- “ C. E. Hilliard, Asheville.
- “ W. F. Chenault, Catawba.
- “ H. Brantley, Stanhope.
- “ E. P. Rose, Wade.
- “ Lawrence S. Flow, Clear Creek.
- “ Leinster Duffy, New Bern.

Dr. Thomas Stamps, Milton.

“ George B. Farrior, Kenansville.

“ Henry S. Lott, Winston.

“ John H. Jenkins, Dallas.

“ Robert A. Reynolds (col.), Murfreesborough.

“ Aaron M. Moore (col.), Rosindale.

W. J. H. BELLAMY, M.D., Secretary.

RULES FOR THE GOVERNMENT OF THE BOARD OF MEDICAL EXAMINERS OF NORTH CAROLINA.

1. The Board of Medical Examiners shall meet on the day preceding every meeting of the State Medical Society.

2. A quorum being present, an official meeting of the Board shall be held before commencing examination of candidates, and also after all examinations have been finished. At these meetings all questions or subjects for the consideration of the Board, except the qualifications of candidates for license, shall be discussed or determined.

3. The Board shall be prepared to examine applicants from 8 A. M. to 2 P. M., and from 4 to 7 P. M.

At 2 and at 7 P. M. the whole Board shall assemble to pass upon qualifications of candidates. No other business shall be transacted at these meetings except by unanimous consent of the Board.

4. The Secretary only shall announce the results of examinations to candidates as soon as it is practicable; and licenses shall not be issued before the close of the afternoon session of the Board.

5. A candidate who has signally failed upon one fair examination, shall not be reexamined during that session of the Board; doubtful cases may be reexamined and reconsidered, but only after an examination has been made of every other candidate who may present himself, except by the unanimous consent of the Board.

6. Reexaminations shall be conducted only on the branch or branches of Medicine upon which the candidate is considered to have failed. He shall be examined in the presence of the whole Board by the Examiner or Examiners in whose branch or branches he has failed, but the questions propounded shall have been previously submitted to the whole Board and approved.

7. In estimating the qualifications of a candidate a preliminary canvass of the merit of the candidate shall be taken, in which each Examiner shall rate him according to merit in his (the Examiner's) own branch. A vote based upon the reports of all the Examiners shall then be taken, which vote shall decide the election or rejection of the candidate.

8. In deciding the results of reëxaminations the Examiner who has (according to rule) conducted the examination shall cast the first vote.

9. The Secretary shall require a written certificate of the moral character of each candidate and that he is twenty-one years of age.

10. The Secretary shall number candidates in the order of their presentation and payment of fees, and the Examiners shall examine them in the order of their number.

11. The Secretary shall furnish each member of the Board, after the adjournment of the same, a printed list of all licentiates of the Board, also a written list of all rejected candidates.

READING NOTICE.

I have used *SUCCUS ALTERANS* (McDade) in my practice ever since it was introduced, and have always found it eminently satisfactory in the treatment of all syphilitic cases of skin diseases and also of all blood disorders.

J. C. MODROCK, M.D., Marion, Ohio.

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLETTH THOMAS, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

THE NEW HYPNOTISM—ITS METHODS AND ITS POSSIBILITIES.

(A Clinical Lecture Delivered in New York Post Graduate Medical School, April 25, by Prof. C. L. DANA, M.D., Reported
J. M. HAYS, M.D.)

GENTLEMEN:—I am especially anxious to bring the subject of hypnotism before you to-day for two reasons: 1. Because it has recently been brought forward in a new manner by certain French physicians at Nancy—Drs. Liebeault and Bernheim, and at Zurich by Prof. Forel. 2. Because hypnotism in a modified form has been recently applied, practically, very extensively in this country by persons who claim to be “Christian Scientists,” “Mind Curers,” etc.

My object will be to-day to show some of the phenomena of hypnotism in the subject before me, and then to show that, by adopting the methods of suggestive medicine as taught by Bern-

heim and his school, we can accomplish in a safe and rational way all that is done by mind-curers and other like classes of charlatans.

HISTORICAL.

Hypnotism in medicine has been known for over a century. Its methods have been applied, however, mostly by quacks, and no very careful investigation of its methods or results has been made until of late years. Much of the recent scientific investigation has been done by Charcot and his pupils in Paris. Working at La Salpêtrière he has, however, had to deal chiefly with hysterical persons, and he has in consequence taught hypnotism in what I believe to be a misleading way. Indeed, I fear that all the works that have come out from his School on this subject have a decidedly erroneous element in them, and should not be adopted as guides in the study of this class of phenomena. The study of hypnotism or suggestive medicine and its applications has received its greatest practical impetus through the work of Liebeault and Bernheim at Nancy, and from Forel at Zurich. This work has been supplemented, also, by that of Fontan and Segard, of Toulon, who have written a manual on the subject which is called "Elements of Suggestive Medicine," a work not equal in originality and value, however, to one on the same subject by Bernheim.

The differences in the Schools of Paris and the Schools of Nancy and Zurich are very decided. The methods of hypnotizing people are different, their theories are different, and their practical applications of the process are different.

METHODS OF HYPNOTIZING.

Charcot adopts the old methods of hypnotizing—that of braid—in which the person fixes the eyes upon a bright object until he passes off into a hypnotic condition. Bernheim and his pupils adopted what is known as the "suggestive method." The patient is placed in a chair in front of the operator. The operator then talks to the subject in a firm and confident voice, assuring them that they will go to sleep in a short time, telling them to make no resistance—that their sleeping will be natural, that nothing will be done to worry or fatigue them, that they will dream pleasant dreams, that they will wake up feeling better; then that they are feeling

drowsy, their eyes are heavy, objects look confused, the lids are falling, they are closed—in a moment more the patient goes off to sleep. This is the persuasive or suggestive method. It requires some little time—five to fifteen minutes. It may fail the first time and succeed the second. I will illustrate these two methods upon the patient before us.

The differences between these methods, according to Bernheim and Forel, are fundamental in their effects. The method adopted by Charcot will sometimes throw hysterical and nervous persons into a state of spasm or hysterics; and this, I am sure, is the case, because I have produced such results myself. On the other hand, the suggestive method, it is claimed, has no such effects and does not leave injurious after-effects.

NUMBER AND CHARACTER OF SENSITIVE PERSONS.*

Profs. Bernheim and Liebeault find that, by their method, they can hypnotize 90 per cent. of their patients. Forel, after studying the work at Nancy, says he has been able to hypnotize at least 80 p. c. of his patients. The class of persons that are hypnotized does not include necessarily the hysterical or weak-minded, but includes healthy persons, and the condition of hypnotism as produced by suggestion is not an abnormal one. It is not a neurosis, but simply a form of sleep. Children and highly excitable hysterical persons and insane persons are rather less easily affected by this method than those with a sounder nervous constitution.

DEFINITION.†

Hypnotism is a peculiar mental condition in which the will power is suspended and the person is put in a state in which he has to

*The proportion of persons of all ages found to be hypnotizable by Beannis was about 18 or 20 per 100. Children up to the age of 14 are very susceptible. After the age of 55 susceptibility lessens. Men are almost as easily affected as women; but persons of a docile mind, and those trained to some degree of mental discipline and capacity for submission, such as soldiers and artisans, are more sensitive.

†It was abundantly shown by the experiments in this city, some years ago, that the classical stages described by Charcot do not exist except by suggestion; however, there are different degrees in which the subject may be hypnotized, just as there are different degrees of soundness of sleep. And it should not be forgotten that *real therapeutic effects can be gotten even when the patient does not fall into sleep,*

respond to every suggestion that is made to him by the operator. The powers of his mind that are left are also in such a state that they can be concentrated in one or another direction very powerfully. There are therefore in hypnotism three conditions. 1. Suspension of will power. 2. The condition of automatic response to suggestion. 3. Concentration of mental force in various directions.

EXPERIMENTS.*

I will now illustrate some of the phenomena that this condition shows :

I can affect his sympathetic system, or organic system, only indi-

and that the hypnotic state may not be one of actual unconsciousness. The stages mentioned by Liebeault are : 1. The patient does not sleep, or close the eyes, or lose himself at all. 2. The patient is awake, but the lids are closed and cannot be opened. 3. Is one of "suggestive catalepsy." 4. The patient cannot move his body spontaneously. 5. Contractions occur on suggestion. 6. Automatic obedience. In all the foregoing the subject recalls what occurs after the seance is over. Three other degrees are described, after all of which the subject does not remember what has happened. These are called somnambulic states. These various degrees are not sharply defined from each other. They all have the common character, *not of sleep*, but of suggestibility. "Hypnotism," says Bernheim, "is the provocation of a peculiar mental state which augments suggestibility."

*Prof. Dana now waved his hand before the subject's face and caused him to pass into a profound hypnotic state. First, he produced hemi-anæsthesia, extending even to the eye, nose and sense of taste, so that quinine was tasted only on one side, anæsthesia stopping exactly in the middle line. Very marked motor disturbances were next produced, such as catalepsy and tetanic rigidity, the subject assuming and maintaining the opisthotonos position, holding any part of the body in a state of rigidity wherever it was placed, etc. The subject was then told that hideous forms were in the room pursuing him, which caused a very decided acceleration of his pulse, as proven by my watch, and came near making him escape over chairs and tables from the room. The physiological effects of various medicines held at a distance from the subject were experienced by him, such as emesis from ipecac, etc. But this result was due to suggestion simply. The Professor then told the subject that he had before him an audience of depraved drunkards, and suggested that he make them a temperance speech. This he did *ex consuetudine*, and gracefully finished with a poem from Thomas Hood. He was then told that he had a chill, whereupon his face became cold and pallid, and, shivering all over, he fastened his coat closely about him. Total abolition and then exaggeration of the tendon reflexes were alternately produced. The subject was told that in forty-five seconds he would awake. We all looked at our watches, and just at the time appointed he did awake.—J. M. H.

rectly. I cannot by suggestion make his heart go faster or slower, or cannot by suggestion make his bowels empty themselves, or his skin grow white or red. I can, indirectly, do this by acting on his feelings. In the same way one can apparently move or increase the power of the special senses—one can increase the sense of hearing or the sense of sight, so that persons can even count figures or see figures through the closed lids.

PRACTICAL APPLICATIONS.

The subject that I show here is what we call a trained subject—a man who has been hypnotized so often that he is hypnotized now very easily. He is a genuine case, however, and illustrates all the phenomena of well-marked hypnotism.

In applying hypnotism to other persons you will not so easily get out all these phenomena, but you can accomplish a good deal practically in the cure of diseases. You take patients in your office, put them through the suggestive method I have described—you suggest to them when in this state that they will have no more rheumatic pains, no more neuralgia, that they will have their menses regularly, that they will give up drinking, using tobacco, will sleep regularly, that the trembling or paralysis will grow less—you do this on several occasions and you will, in a pretty large per cent. of cases, relieve or cure functional or diathetic diseases. By using this method of the School of Nancy,, applied in the way I have shown you, being very careful about giving it to hysterical women, imbeciles or insane, but confining it usually to persons of average sound nervous systems, and applying it only in cases where you know there is no malignant disorder, you can accomplish the same results that the mind-curers and Christian scientists do, and you can do more, because you will not do the harm that they do, and you can apply the remedy in the proper cases. Here lies the great importance of this subject at the present time. I believe that by the proper application of suggestive medicine in the hands of trained physicians, we can take away the ground from under the mind-curer and the faith-healer and all that class of charlatans. I would not recommend this practice, however, except under great cautions. Watch the effect upon persons on whom you try it. Don't let the laity experiment on each other. Travelling mesmerizers and professional hypnotizers ought to be abolished. Hypnotism ought never to be used in private parlors—

ought not to be made a toy or plaything. It can be made, however, as I have already said, not only useful in medicine, but perhaps it may be used in moral education and in correcting the morbid habits, such as those of tobacco, alcohol and opium.

Those of you who are interested in studying the more recent literature of this subject will find that very little has as yet appeared in English.

In French, there is a monthly journal devoted entirely to hypnotism in *Reveu de L'Hypnotism*, edited by Dr. E. Berillon, at Paris. There is an excellent summary of the present condition of "suggestive medicine" in a report of the Royal Academy of Medicine of Brussels.

Bernheim's work is in French ("De la Suggestion"), Paris, 1886. A new edition is just out. Bernheim has given a summary of his views in the *Gazette des Hospitales* for March 27, 1888.

Fontan and Séquard's work ("Elements de Medicine Suggestion"), Paris, 1887, I have already referred to. Forel's contributions have appeared in the *Munich, Medicin Wochenschrift*, 1888, Nos. 5 and 13. Obersteiner has written a monograph upon the subject of Hypnotisms, Vienna, 1887. Ochorowicz, "De la Suggestion Mentale," Paris, 1888. Dr. A. Hückel, of Jena, has also written a monograph with a fairly complete bibliography.

ESSENCE OF TURPENTINE IN THE TREATMENT OF PAINFUL INTESTINAL AFFECTIONS IN CHILDREN.—The author (*Journal de Medicine*) considers this drug eminently soothing to an irritated and inflamed intestinal mucous membrane. It tends to heal ulcerated surfaces, and is also antiseptic and disinfectant. It is also useful to excite increased salivary, gastric, pancreatic and intestinal secretions. In the author's experience it was also useful in relieving the pain accompanying diarrhoea or constipation; also the vomiting and emaciation which so often attend enteritis in children brought up by the bottle. It is also indicated in dysentery and in the infantile cholera produced in connection with high temperatures, when the intestine is evidently irritated by the lactic, acetic and butyric acids which have been generated within it. For a child one year of age the dose is two drops, and this may be repeated every two or three hours, according to circumstances.—*Am. Med. Digest.*

DISEASE OF THE HAIR-BULBS AND BLEPHARITIS.

Dr. Roeder, in 1861, while studying skin diseases under Hebra, recognized the identity of blepharitis and sycosis, and has adopted the same treatment—epilation—for both affections with good results (*London Medical Record*). From the examination of a large number of cases he has come to the conclusion that the cause of the blepharitis is the inoculation of the hair-follicle with the purulent secretion from the conjunctival or lachrymal sac. In the early stage of stenosis of the lachrymal duct, before there is any blennorrhœa of the sac, one often sees tears accumulate in the lower cul-de-sac. As long as there is no pus the cilia remain healthy; but, as soon as there is the slightest admixture of pus, blepharitis makes its appearance on the under and corresponding part of the upper lid. The writer considers this so constant that he would diagnose the presence of lachrymal obstruction and blennorrhœa of the sac. The writer explains the action of the pus thus: As long as the fluid in the cul-de-sac which bathes the openings of the hair-follicles consists simply of tears, the sebaceous secretion from the glands of the hair-follicles prevents it from entering the latter, but the admixture of alkaline pus allows a fatty emulsion to form, which readily enters the follicles. The hair then swells up by imbibition of moisture, thus closing the orifice of the follicle and causing distention of the latter. If the pus escapes through the surface, it appears as little crusts between the lashes, often accompanied by little warty prominences. In slight cases the follicle again embraces the hair, the glands resume their function and prevent the further entrance of tears, and the normal condition is restored. But it is a necessary condition that the purulent secretion from the conjunctival or lachrymal sac should first cease. Usually recovery does not take place so readily. The hair is at first retained in the follicle by the swelling it has undergone. The whole process may be repeated thirty times or more. Infection of the hair-follicle, throwing off of the old and growth of the new hair. But in course of time cicatricial contraction of the whole follicle takes place, so that the young hairs, meeting with an obstacle to their exit, become curved. If the obliteration of the follicle reaches a still higher stage, the dead hair may be retained and acts as a foreign body. The writers believes

that a cure can only take place when all the affected lashes have been shed or removed; but, if the new hairs are not also to become affected, it is absolutely essential that the conjunctival or lachrymal affection should be cured; as long as this is not the case, the new hairs must be removed as they appear. The writer uses a four per cent. solution of boracic acid as a lotion. The erysipelatous swelling of the lid, which is so frequent an accompaniment of this affection, also disappears under this treatment, which the writer has found usually efficacious in syecosis of other parts.—*Medical Record*.

THE UNEQUAL WIDTH OF THE PUPIL IN INTERNAL DISEASES.

Dr. F. Pastkernatzky, from observation made at the clinic for diagnosis and general therapeutics of Prof. Ischndowsky (*Arch. Ophth.*, vol. xvi, No. 3), gives the following: He generally found unequal width of the pupil in those constitutional diseases in which there is a distinct anatomical lesion, generally on one side only (croupous pneumonia, pleuritis, renal colic, affections of the heart and liver). The various diseases may be ranged as follows, as regards the frequency of occurrence of this symptom: In croupous pneumonia, inequality of the pupils occurs in 85 per cent. of all cases; in heart disease and aneurism of the aorta, in 61 per cent.; in pleurisy, in 52 per cent.; in catarrhal chronic pneumonia, in 38 per cent.; in acute rheumatism of the joints, in 25 per cent.; in catarrh of the respiratory passages, in 25 per cent.; in scurvy, in 16 per cent.; in typhus fever, in 16 per cent.; in febris recurrens, in 15 per cent.; in typhoid fever, 13 per cent. In croupous pneumonia the pupil of the affected side is larger in the beginning of the process; the maximum of dilatation is reached at the height of the disease. Shortly before the crisis, and during the latter, the pupils become equally wide, while during convalescence the pupil of the affected side becomes smaller. The author believes that the inequality of the pupils in internal disease is a reflex phenomenon in close connection with the process of disease, the nature of which has not yet been determined.—*Dublin Journal of Medical Science*.

SECTION OF SURGERY.

By P. B. BARRINGER, M.D., Chairman.

(Read before the Medical Society of the State of North Carolina,
at Fayetteville, May 8, 1888.)

*Mr. President and Gentlemen of the Medical Society of the State
of North Carolina:*

It is no longer possible within the limits of an annual address to summarize, however briefly, the work of a year in a department that is now advancing with such rapid strides as in the surgical branch of medicine. The *Index Medicus*, a few hundred journals and some of the later text-books of surgery would no doubt give us a moderate conception of what has been done in this line during the year, but for an occasion of this kind it would no doubt prove heavy reading. Moreover, I am mindful of the caution against long reports given at our last meeting. I will therefore confine my report to that small part of my department, which may at least present something not stale to all of you. The subject of my report is, then, gentlemen,

THE LATE INVASIONS OF SURGERY.

In the line of new operative procedure the past year has been exceedingly prolific. It has witnessed the successful invasion of three regions hitherto considered inviolable. I allude particularly to the opening and digital exploration of the *pericardial cavity* by Stezner, the removal of the left lobe of the *liver* by Langenbeck, and the no less bold and successful removal of a tumor from the *spinal canal* by Victor Horsley. Other invasions there have been, but none so novel as these, although one or two others of special interest will be mentioned. Stezner, in the *Centralblatt für Chirurgie*, reports the following: A student, after a spree, sought to commit suicide by driving a sewing-needle into the heart. Twelve hours after the introduction of the needle the first serious symptom began. He then had pain in the cardiac region, difficulty in breathing and a loud pericardial murmur at the apex. After thirty-

six hours the symptoms became so very serious that an operation for the removal of the foreign body was decided upon. No trace of the needle being found, either under the skin or in the intercostal space, a piece of the fifth rib was resected, thus opening up the left pleural cavity. Then the pericardium was opened up and about a teaspoonful of cloudy pericardial fluid ran out, and now the needle could be felt lying diagonally in the right ventricle. They then succeeded in driving its head out through the anterior wall of the heart, and then fixing it in this position with the finger-nail. The irregular and violent beating of the heart made it very difficult to catch the foreign body with the forceps, and in the attempt it again slipped within the ventricle, but this time assuming a vertical instead of a horizontal position, rendered it impossible to make any further attempt at its removal. Besides this, an iodoform tampon, used to plug up the hole in the pleural cavity, was drawn into the cavity by a deep respiratory effort. The tampon was not found. The wound was thoroughly tamponed and the patient was well in four weeks, meantime suffering from a severe pneumothorax, with copious exudation. At the present time the patient enjoys good health and feels no effects from his escape. There is neither heart murmur nor abnormal pulse, nor any trace whatever of the pleural exudation. Where the needle now is, is of course a mere matter of speculation. It may be in the heart or it may have gone on into the mediastinum. No case similar to the present, in which the heart has been laid bare by splitting the pericardium, is mentioned in medical literature.

Such a report, gentlemen, sounds almost beyond belief, and were it not supported by the good name of so eminent a surgeon would be subject to doubt. That a patient should survive the dangers of inhibition, mechanical valve entanglements, pneumothorax, and finally fatal empyema and pericarditis, is almost miraculous. While the technique of the operation was not given in the report that was read, the presence of the iodoform tampons and the result show strict antiseptic precautions. But of this again.

Langenbeck reports in the *Berliner Klinische Wochenschrift* the successful removal of a portion of the liver weighing one pound. Owing to congestive hyperplasia, due to impeded circulation, it was both heavy and movable, causing intolerable distress, especially in the dorsal decubitus. The diagnosis was made by exploratory incision. The hinge-like attachment to the body of the liver was

ligated in sections and the constricted portion removed. Symptoms of internal hemorrhage occurred the same evening, the abdominal cavity was reopened and the bleeding checked, the blood removed by sponging and the wound closed. Healing was prompt, but ascites developed shortly, accompanied by general œdema. The abdomen was twice tapped and the patient went on to a good recovery without further mishap. Langenbeck holds this to be the first case in which a large portion of the human liver has been removed by excision. Such an operation is beyond comment, unless it be said that it was a very hazardous operation to be undertaken as a mere matter of complaisance, as it seems to have been. (In the *Lancet* of February 4-8 will be found a detailed account of this case, and the same is to be seen in the April number of the *Therapeutic Gazette*, page 264.)

The last, and perhaps the most successful, of the new procedures of the year was the removal of a tumor from the spinal canal by Victor Horsley in January last (*Therapeutic Gazette*, March, 1888, p. 198). The patient, a private patient of Dr. Gowen, had spent three years in severe pain, which was most intense and severe just below and inside the angle of the scapula, and was accompanied by absolute loss of motion and sensation in the body below that level. The upper border of the anæsthesia was distinctly in the region of the fifth intercostal nerve on the left side, on the right it was less accurately defined, but did not extend higher. All the symptoms agreed with those of tumor of the spinal cord, and the intense pain afforded ample justification for making an attempt to excise the tumor. Mr. Victor Horsley accordingly removed the spine and parts of the laminæ of the fifth and fourth dorsal vertebræ, but not until the third vertebra had been similarly treated did the tumor come into sight. It was a small oval myxoma, compressing and making a deep impression on the left side of the spinal cord below the third vertebra. It was easily shelled out, and, under careful antiseptic treatment, the temperature did not rise more than 1° F. The wound healed rapidly, except at the uppermost point, where a drain had been left in, by which a little cerebro-spinal fluid flowed away very slowly. For three or four weeks the former acute pain did not lessen, and even at times seemed greater; but after that it gradually and intermittently decreased, and now, after seven months, is entirely gone. The sensation and motion of the body and legs

are almost completely natural. This is, we believe, the first time that such an operation has been attempted, and we must most heartily congratulate both the patient and his adviser on the triumphant character of its success. However far and however quickly surgery may advance, it will long be a memorable day when it gained its first victory on so new a field and over so formidable an enemy.

From the foregoing it indeed seems as if surgery will ultimately tolerate no limit to its domain, and that ere long all of the so-called "vital centres" will belong as properly to the domain of operative surgery as the extremities have in the past.

A propos of the "vital centres," while the subject of brain invasion is not new, and therefore does not properly belong to this paper, it has within the last year assumed so aggressive a character as to justify its insertion. I will therefore insert here the history of a case reported by Dr. William Macewen of Glasgow: The patient was a boy aged 9, was taken ill with pain in ear, drowsiness and vomiting, followed in a few days by chills, which continued until his admission into the hospital. Upon admission was pale and emaciated, with livid lips and herpes; short catching cough; temperature 100.8° ; pulse 108; drowsy; pain right ear, from which came offensive discharge. On the third day in the hospital pain became very severe and chill followed. No evidence of retained pus in the ear. An opening was then made into the mastoid cells with a chisel, a stream of antiseptic solution passed through the wound and out by the external meatus, and a drainage-tube left in. No change for the better followed, and the lad continued with rigors and to decline until the 30th day, when Dr. Macewen was called into consultation. Fetid discharge was then coming from the ear and the patient was in a stupor. Abscess of the temporo-sphenoidal lobe was diagnosed and an operation at once proceeded with. The middle ear was disinfected and the scalp cleansed. A one-half inch disc of bone was removed from the squamous portion of the temporal bone at a point one inch above and one-half inch behind the centre of the meatus auditorium externus. The membranes were incised, whereupon the brain tissues greatly bulged out. A hollow needle was then carried in the direction towards the eminence of the petrous portion of the temporal bone. Gas and pus of a most fetid nature flowed freely when the needle had gone to the depth of three-fourths of an inch.

The needle aperture was enlarged with forceps and necrosed brain tissue removed. After all pus and necrotic tissue had been removed the abscess cavity was washed out with boracic acid solution. A counter opening was then drilled through the base of the skull just above the osseous boundary of the external meatus, involving the squamo-petrosal suture, the membranes pierced and the lowest portion of the abscess cavity reached by needle and again washed out through this new channel. Chronicized chicken bones were introduced into both openings, boracic acid was thickly dusted on and a dressing of paper pulp pack super-imposed. Patient soon rallied, and he steadily improved from the time of operation on. All cerebral symptoms vanished. The wound was dressed once weekly and the tubes as often shortened as forced out by granulations. A lapse of six weeks saw the child plump and perfectly well.

You will observe here that the temporal bone was *riddled*, its mastoidal portion was opened into the cells, the upper part of the squamous portion was perforated and a one-half inch disc removed by the trephine, while its lower portion or the upper part of the petrous portion was obliquely drilled for better drainage. And yet the patient recovered.

In the language of the apostle we may well ask: "What do these things mean?" Has the past year been so replete with anatomical discoveries as to warrant the surgical invasion of all these new regions with such energy? It is not that. The surgeons of the past generation were about as well equipped in the way of anatomical knowledge as those of the present. Working without anæsthesia, simple operative skill was cultivated to an extent that we now little appreciate. Boldness was an essential and was cultivated almost to the point of bravado. But bold as they were, they had their Rubicon, which they dare not cross, and they knew it. What is it, then, that has, as it were, swept away almost the limits of surgical invasion? The secret is to be found in one word, and that word is *Antisepsis*. If you are a stickler for names, as some are, call it *cleanliness*. But antisepsis or cleanliness, as you will, this is the secret of the rapid strides of surgical science in the last few years. No method of treating wounds in any part of the human body will give such uniform results as this method, and no method will be tolerated in certain regions of the body unless based upon these same principles of surgical cleanliness. Surgical interference with certain regions of the body, without antisepsis of some kind, can now come only from the bravado of ignorance, and such ignorance is a crime.

PRESIDENT'S ADDRESS.

Fellow-Members of the Medical Society of the State of North Carolina:

It is at all times pleasant to meet our friends—but never so pleasant as when in the place of our nativity we welcome them to our homes.

This pleasure, in its fulness, is mine to-day, as I add to the greeting already so gracefully tendered you, my own warm welcome to the place dearer to me than any spot on earth—the old historic town of Cross Creek—the stirring, progressive city of Fayetteville of to-day.

Since the last meeting of our Society, held in Charlotte, we have all been pursuing, under changing circumstances and with varying success, the duties of our profession, and we come now to lay our offerings of the fruit that has been garnered on the altar of scientific progress. Bringing here this yearly offering, we can boast, at least, that we have no selfish ends in view, but that, like all the work that is done at these, our annual meetings, it is freely given for the benefit of our fellow-men. The advancement of knowledge, the rooting out of old, effete and useless dogmas, and the laying of a foundation on which shall be erected a monument that shall mark the progress of our profession in this age—these be our aims.

To any one who has observed the advance in our profession in the forty years just passed, it would seem wonderful that anything remained to be done, but yet the fact is before us that never before did the soil seem so fertile for the bringing forth of new and better fruit, and the veins seem only just discovered that lead to the richest deposits of golden ore. In order to cultivate these fields and wring from the unwilling ore the bright gold which is coveted, the future men of the profession must take a step higher in the pursuit of excellence and know that there is no short or “royal road to learning,” but that upwards they must climb the stony mountain-path—“now hiding in the shadow of the deep ravine, and now coming out on the projecting crag,” till at length they stand safe on the mountain-tops “which drink in the waters of the rain of heaven.”

Surely the times past of our ignorance should suffice us to have

walked in the way of our fathers. Only men of cultivated minds can grasp the questions which the advanced thinkers are continually bringing before them. No longer can the boy be taken from the plow, with only a smattering of English and arithmetic, and, after a term of two years, go forth to the work that is required of the physician of the present day. Rapid transit over the preliminary course of education, placing in the ranks of the profession men with minds simply crammed with theories will no longer ensure success. In every profession in this practical age men rise to the highest positions, not by theoretical education alone, but by practical experience in all those minor points which are so essential to the perfect man. The Military Academy at West Point is conducted on this principle: Every cadet is a private soldier, taught thoroughly obedience to authority, drilled in the use of arms, compelled to stand guard through storm and sunshine, to endure hardness and submit to all the drudgery of the soldiers life—step by step he advances—mind and body equally educated for the life of the warrior which is before him. No quick advance, but by constant discipline, close study, rigorously practiced through four long, weary years, he at last arrives at the point where, having learned to obey, and being thoroughly versed in the duties of the soldier, he can take the lowest rank as an officer, and still find before him higher objects of ambition and need for continued study and self-discipline. In all departments of life there is more and more required in the way of preliminary education, and when this has been received they advance from one position to another, step by step, becoming perfect in every subordinate position, until at length, being well versed in all the details of the work, they enter into the discharge of the highest duties thoroughly equipped for the work which is before them. So in our profession the world is demanding a complete classical course, collegiate or its equivalent, before one shall enter on that which we term a strictly medical course. In order to meet this public demand some of our medical colleges are making this preliminary study a prerequisite to attendance on lectures. In addition to this, however, there is needed the drudgery, so to speak, of practical work in the hospital and clinics only to be found in large cities. No one, but one who has passed through the terrible ordeal of entering upon active life from the lecture-room, crammed with theories, well posted in all the text-books, but utterly devoid of

practical experience, can appreciate what a year or two in the wards of a hospital is worth. In other words, a thorough and complete education, theoretical and practical, is essential and demanded. Taking this view, our Society has been untiring in its efforts to advance the standard of medical attainment, and, after long and persistent efforts, succeeded in establishing the Board of Examiners, calling public attention to the law requiring the endorsement by this Board of those who desired to practice in the State. Educating the people first to the good results that would come to them individually, public opinion soon caused many to come forward and conform to the law. The result has been, what?—benefit!—untold benefit to the profession and the State!

While the standard has certainly been raised, it has never been quite as far advanced as we hope yet to see it. We desired to advance slowly but surely. The duties of the Board are very responsible duties, and the Society has always sustained them in fulfilling them. The honor of being a member of this Board is the highest in your gift. The beneficial results of the fearless discharge of duties devolving on them has reached far beyond the State, and has caused more rigorous examinations in colleges in order to maintain their own *ad eundem* caste. And, too, it has stimulated our young men to greater zeal in preparation for their life-work. Still, then, let us give them our full, free, cordial support, and hold up their hands in their almost thankless task.

The young men of the Society, appreciating the benefits derived from her hands, are lifting the burden from our shoulders, and are showing themselves worthy of the highest esteem. Stimulated by the grand possibilities of the age in which it has been their good fortune to live, they are adding dignity to their youth and receiving praise from their elder brethren because of their determination to reach the highest point of excellence and to reflect credit upon our Society. Year after year the papers which have been placed before us by our young friends have displayed no ordinary degree of cultivation and evinced a true conception of the dignity of their calling, as well as a clear view of the great field in which their labor will be repaid by honors enduring and precious beyond price. Without in the slightest degree detracting from the power, learning, wisdom and dignity of the elder men of the Society, I can say that within the last twelve years the Society has improved wonderfully in its

intellectual force, more than keeping pace with its vastly increasing numbers. In this none more heartily rejoice than those of us who are now the elderly members of the Society.

This much, then, our Society has accomplished for the good of the profession, and in so doing has benefitted the people to the remotest corners of the State. She has placed in every hamlet and village men who are able to give in any emergency skilful advice and assistance. Then, too, we are elevating our profession and at the same time doing better service to the country by establishing Boards of Health, both State and county. How much good sanitary work they are doing very few of the people, and perhaps very few of our own profession, appreciate. How much more could be done, with the full, hearty coöperation of the communities in which these Boards have been established, is simply incalculable. The question may very properly be asked: Are we enlisting the people in this sanitary work as fully as we could? Are we not rather doing ourselves a wrong, in that we "hide our light under a bushel?" The members of our State Board do a vast amount of good work in the way of experimenting and writing, but very nearly all has been done through professional channels, and very few of the laity have access to these papers, and consequently know very little of the objects and aims of the Board.

The suggestion comes frequently: Would it not be well to select one or more secular papers in the State through which these plans could be presented, and so obtain the sympathy and coöperation we need for full success.

You will remember the able report of the chemist of the State Board at our last meeting and the subjects then discussed. All the work therein proposed can hardly be carried to completion without our aid. We can do much through the members of the Legislature of our respective counties by showing them the importance of such legislation as is needed in all these matters pertaining to public hygiene, and by calling the attention of editors to the necessity of keeping these matters before the public eye. The failure to do this will certainly result in the loss of much that we have already accomplished. This was exemplified in the last session of the Legislature. Unwise legislation crippled in important points the power of the Boards of Health in some of our counties, and unless we can act in the profession in more perfect unison there will be more of just such suicidal action in other counties of the State.

There is an unaccountable jealousy aroused in county officers at the thought of losing any power which has formerly been entrusted to them. We must bring the people to a knowledge of the fact that in these matters we have no selfish ends in view, and *we must have no self in it*. We must have magistrates, county commissioners and the people in perfect sympathy with us, and this can be done if aided by that high-tone loyalty to our profession which will not allow any member, for the sake of a few paltry dollars to bid for any office in their gift. The commissioners under this law have the power to fix the salary of the health officer of the county, and in a few cases to select this officer from the medical men of the county. Let them be compelled *to select in reality from the profession*, and not from applicants and bidders for the position. We must respect ourselves if we desire to be respected.

That wonderful guide, the "Code of Ethics," is ever before us to direct us in all things professional, whether in our duty to each other, to our patients, or to the State. If we would only be guided by it, if we would turn to it for instruction whenever assailed by temptation to do a professional wrong we certainly could not err.

It is wonderful how the framers of these rules of conduct foresaw the needs which were likely to arise. What a clear sense of right, what a high sense of honor, what an exalted view of the dignity of the profession they must have possessed; how thoroughly imbued they must have been with the desire to have the profession attain a position second to none save the ministers of the holy Church. If I were asked by a young man entering the profession what mere human guide he should take to aid and direct him, by the purest, the cheeriest and happiest path to distinction, would give him honor from men and praise from the unseen world, I would say lay well to your heart the maxims and principles of the "Code of Ethics" of the American Medical Association.

It has been always the custom for your presiding officer, after thorough study of the wants of the Society, to recommend in his Annual Message such changes as may appear needful. You will notice that I have refrained from making any such suggestions. It has seemed to me that, after years of labor, we have arrived at a point (while it may not be that of perfection) where it would be well to call a halt and a rest awhile.

Certainly we should feel pride in the fact that we have accom-

plished so much, and that our Society is honored at home and in our sister States. Much can be gained by perfecting that which we have already in hand, and by energizing the different Sections. To this end you will be called upon to decide at our present session what shall be done in order that the work of the Sections shall be more thorough than in times past. The fact that the appointments are made hurriedly, and without consultation with those best qualified to judge who are best suited for the work, and very often without knowing whether the person appointed will accept the position and *do the work thoroughly*, has had much to do with the want of success. While I have not made any suggestion on this point of my own, still I would heartily endorse the resolutions offered at our last meeting by Dr. Long, or any other action which will promote the object so much to be desired.

Notwithstanding the appeals that have been made by your presidents in behalf of the NORTH CAROLINA MEDICAL JOURNAL, it does not receive at the hands of the profession that cordial, efficient support which it deserves. Its editors have made it a success by their own hard work under most trying circumstances, and in spite of our lack of coöperation. Certainly every physician in the State should be a subscriber, and every one who can do so should contribute to its pages. State pride alone should compel this, if the fact that it is the organ of our Society fails to be a sufficient incentive. It is appreciated, as it deserves to be, outside of our State, and is attracting contributors of position who value it as a means of communication with the profession in the States. And as our Society extends its usefulness the JOURNAL will advance with it and be the exponent of the intellectual power of its members. It is an engine of great power, and utilized as we could utilize it, it would become a necessity in every medical library. The fact that it is the everyday experience of the physician which is worth recording, has been often urged before, but it cannot be too frequently called to our attention, until it bring forth fruit. A distinguished professor in a medical college said to me that, comparing the working of our Society with the one with which he was connected in a large city, what most forcibly attracted him was the fact that we came together each one to tell, it might not be in polished language, but in his own simple way, what he had observed and what he had individually done in the year past, asking for criticism and desiring to compare

results, not for mere personal advancement, but for the benefit to be carried with him into his work for the next year; whereas in the cities each comes as a teacher with his own theory to establish and impress upon others. This certainly is complimentary to our Society, and all the more so because of its truth.

Many of us look forward to these annual gatherings with the greatest interest on this account. We expect to confer with those of our friends in whom we have confidence as to points of practice. We come to learn something, to have our minds refreshed and to go back to our work better fitted for the trials of the coming year. I am sure that no one, whatever his age, or experience, or self-reliance may be, ever attends closely to the debates, the reading of essays and papers brought forth from the experience of old and young men in the Society without feeling that every member should do all in his power to contribute something to the interest of these meetings, and more feeling thankful for the opportunity thus yearly offered of adding to his store of useful knowledge. With a desire to increase the usefulness of the Society in this direction, more prominence has been given every year to original papers, and our Secretary has made a good step in advance in attempting to have each paper assigned to a particular hour. When it is understood generally that the Secretary is to be notified in full time this can easily be accomplished by referring these papers to their respective Sections, and this will add to the value of the "Transactions."

Among the many changes which take place yearly the saddest are those which remove from our ranks fellow-members whom we have been accustomed to greet year after year, and who have added to the measure of our success and enlivened our meetings with their always welcome presence, but time will bring us all at length to the day when we must lay aside our earthly work, as our departed brothers have done, and close our eyes to open only upon the brighter scenes of the celestial streams. May we leave a record as bright as they have done, and have it said of us, as we can truly say of them, that they lived full up to the motto, which should be the motive for all, "*Aliés in serviendo consignor.*" We add to the roll of honor the names of Drs. Cain, Lindsay, Long, Bryan, Meares, Manson, Dillard, Jackson, King, Rountree and Cook—all men of real worth, whose memory the Society will deem it a privilege to honor. But while we look upon the loss of these with sorrowing hearts, let us

not be forgetful that we have great cause for rejoicing in the merciful restoration to health of one whom we all love as a brother, and whose presence here to-day fills all our hearts with joy unspeakable.

The meeting of the International Medical Congress, held in Washington in September last, marks an era in the history of our profession. Gathered from all the civilized nations of the globe—representative men of the profession, united with us in the furtherance of the glorious cause of medical progress; from our mother country first, whose power has spread o'er land and sea, whose men of letters speak in words of thoughtful strain and deepest learning to men of every language and every creed, whose Christian influence hath been felt where'er the love of religious liberty is prized, who has given to our profession men whose names must be immortal; from Scotia's sunny hills, where dwell the loyal clans, which have given to the Old North State some of her best and brightest jewels; from the Emerald Isle, for whom our hearts go out in pity that peace is not within her borders; from sunny France, who has solved the problem that liberty, equality and happiness come quickly to the hand that dares; from the Fatherland, which has made its impress on the world, looking on in wonder at the loftiest statesmanship the nations have ever seen; and Italy, the beautiful land of song—aye, every land where progress and truth and right is loved, hath been sent unto this gathering of the brightest of her sons to join with us in this work, which has for its end the advancement of that science which alone is seeking to destroy all that is inimical to physical and mental manhood. We wonder at the vast array of learning, while we stand awed amid the throng of jewelled knights of our profession, bearing about them the insignia of royalty, evidences of deeds of bravery when, amid the whistling balls and bursting shells, they stood cool, calm and undaunted, bending over the wounded and the dying, without the stimulus of the fight to sustain them, but upheld alone by that one desire, absorbed in that glorious work of saving life or easing the bloody path to the grave (or else it may be that some of these beautiful decorations came to the patient student after weary years of nights of labor, from whose brain has burst forth some thought like that of Jenners to save for all time to come millions from hideous and loathsome death). And yet there stands among these honored ones one clad in the plain garments of the masses, with no jewels to mark his advance in the

battle, no outward evidence of glory won, whose deeds, though unheralded, have been as mighty as the mightiest, and whose achievements have added lustre to his profession, grand in his simplicity, the noble American citizen doctor. Ah, indeed, have we just cause for pride that in our own country we have been able to show to the world our power! meeting all comers in the lists where all have equal right to tilt, where no lack of rank or wealth excludes, but where true manhood tells, and where mind, mightier than the sword, copes with mind, and fires of living thought stream forth till the world, attracted by the brightness, draws near to listen and to learn.

It is very gratifying to us to have our medical friends from our sister States show such cordial interest in our Society. Their presence with us is hailed as an evidence, in some measure, of our success. Certainly, while their words of wisdom edify us, their kind words of sympathy should encourage us to the doing of still better things. We greet them, therefore, as friends and coadjutors in the work before us, and wish them to know that they are always heartily welcome, and we trust they will always feel so fully a part of us that they will not hesitate to join in our debates with perfect freedom, knowing that we are the obliged party.

I have been so much impressed by the reports from our insane asylums of the number of insane outside of hospitals that I feel I must ask this Society to take some action which may have its weight with those in authority. I am aware that we can do nothing directly to ameliorate the condition of these men and women all over the State who are bereft of reason, and who are so loudly appealing through their very helplessness to the State for that guardianship which is their right; still, as citizens who have upon us something of the responsibility, we can enter our protest against the unfeeling, inhuman neglect of these unfortunates whom God has placed at our very doors, that we might honor Him by taking care of them and doing all in our power to induce our legislators to make that provision for their protection and cure which they have refused within the last two years to do. There are now in the Eastern Asylum at Raleigh two hundred and eighty—more than the number which the Institution should accommodate or can provide for well. In the Asylum at Morganton about four hundred, certainly not more than seven hundred, white insane under hospital treatment in the State.

"The last census gave the whole number of white insane as about sixteen hundred, including those in the asylums. The eight years of this decade has certainly increased the number considerably, so that now there are not less than one thousand white insane in the State outside of the asylums, one-half of whom, it is safe to say, could be cured or benefitted by hospital treatment." When you ask me, "Are these one thousand people cared for? need you ask me? Have you not visited your jails and poor houses in your respective counties and seen them there? Can you not find them huddled in cells all over the State with the felons of the land? Or if any county has provided for them by erecting houses for their use, what, with very few exceptions, is the character of these houses? Imagine—no, there is no need of imagination—it is a dreadful reality that the insane in some instances have been confined in narrow cells, without one spark of fire, the whole winter long. Imagine a poor, demented woman, who, in her paroxysms, would tear every vestige of clothing from her body, being protected from the cold by having her cell filled with hay, in which she would lie down like a wild beast. Think of the fact that, under the best circumstances, where they are well fed, can be properly clothed, and these houses are heated as well as log houses can be heated, that to be insane and in confinement means solitary confinement for all those who are at all subject to periodical excitement, and then look at the contrast. I found on my last visit to the Asylum at Raleigh, when at that time there was not a single one among two hundred and ninety-five then under its sheltering care who was under mechanical restraint of any kind. Think, too, of the fact that out of the number, treated carefully, what a large proportion are either cured or relieved, while those under county care are "daily passing, by steady stages, downward to the level of hopeless alienation in such accumulating numbers, that humanity sickens at the conception, both at what they endure now and what life has in store for them, and for all who hold them dear." (Report of the Superintendent of the Raleigh Insane Asylum.) At the last Legislature a plan was proposed for the extension of the Asylum in Raleigh which would have done much towards placing under medical care that portion of the insane who could probably be benefitted by treatment. And why, you ask me, did not the Legislature do something towards this good work? Because (the only excuse ever offered) it would cost the State \$500

per capita for five hundred and sixteen patients. One is at a loss to account for such action on the part of men selected by the people of a free and enlightened country, because of their presumed ability to grasp and deal with questions of the highest importance to the well-being of the State. Yet, to our shame be it said, this was the edict of the last Legislature, that these helpless beings should not have the protection and care they were entitled to. Ah, how different if these had been one thousand voters in some corner of a county represented by any one of the men who voted against the measure. It does one good to know that there were good and true men who spoke out boldly in behalf of these unfortunates, and in no uncertain words; we honor them, though they could not prevail.

Now, my friends, this class of people, so often under our care for treatment, demand at our hands, as a profession whose duty it is to do good and to fight for the right fearlessly, and without regard to the fact as to whether it is popular or not, that we espouse their cause and aid in every way in our power to bring to the light the truth as to the condition of the insane in every county of the State. And even if every county is doing all it can to make them comfortable and to restore them to reason, still the fact remains that this burden should fall on the whole people, and further, that nowhere else but in an asylum under the supervision of one expert in these matters can the same care and benefit be obtained. Truly, I believe there would be but one voice throughout the State if utterance could be given to it in regard to the enlargement of our asylums, and that would be to build them without delay. Build *them*, and not costly palaces for State officials.

I cannot close without a word to the younger members of the Society. I feel in such full accord with them, and in my heart desire their advancement so deeply, that I cannot forbear, at a time like this (when so much depends on their energy and zeal), to ask them to put forth their full strength and stand, against all comers, as the champions of this Society. See to it, my young friends, that only those who attend these annual meetings and are working for the advancement of its true interests shall fill its offices. Place no man in a position of any kind who is not true to his obligations to the Society, however brilliant he may be, however fascinating, however learned. He should love, cherish and sustain and bring all his faculties to enhance her power. Seek for leaders—good and true

men—who love their profession and who sustain its honor. Think what it means to be among the great and true men of our profession. Look now across the waters to Germany at that grand man fearlessly facing death, working for the welfare of his people in the midst of his suffering. Who are these standing by his side, by whose sufferance (humanly speaking) he lives? Men of our profession—men of intellect and worth, greater than the monarch whose life is prolonged by their untiring watch. Is it not worth the striving to make oneself worthy of a calling which lifts its votaries to such heights of usefulness and power? See to it, then, that your life-work shall only add to the power we already have, and see in this Society a friend who will lead you by the safest path to the position you desire to reach.

You will have observed that throughout this address I have spoken of the need of enlisting the people in all our work in which they can aid us. This has been done in no spirit of the demagogue, for I am far, very far, from being a politician, but I love my profession, and I desire every man outside its pale to honor and respect it, and in order to this I would have them see the purity of our motives and the object of our work, so that, consulting together for a common cause, we may bring to a speedy and successful termination all our public work, and not only elevate the people, but ourselves, our profession and the grand old Society we love with all our hearts.

SOME FREAKS OF MALARIA—REMARKABLE HYPER-PYREXIA.

By N. B. HERRING, M.D., Wilson, N. C.

(Read before the Medical Society of the State of North Carolina, at Fayetteville, May 8, 1888.)

“Neither in the interest of truth, nor for the benefit of man is it necessary to assert what we do not know.”—Agnostic.

To assert what we do know is rendered painful at times because of the incredulity of our hearers, yet the converse of our motto would make it imperative upon the medical man to state facts regardless of criticism.

I am fully aware of the infinite opportunities for mistake, and I grant that Munchausen has some admirers even in the brotherhood of doctors, yet the validity of truth is affected neither by belief nor non-belief; and from this *point d'appui* I make the assertion, without the fear of contradiction, that this case did occur as reported; the treatment is no stretch of the imagination, and the result is good.

Notwithstanding the patient is my own daughter, and notwithstanding the emotional tensions of parental affections, of hopes, fears and despair, a well seasoned thermometer records the truth, and pure quinine cares naught whether it kills or cures.

I make this report asking no one to believe it, for I cannot ask others to do what I could not do myself, yet I make it in the interest of human life, for there is a bare possibility of a repetition of the scene. Whoever reads it will be likely to remember it, and should a similar case present itself gratitude will be felt for this incredible story.

To that class of physicians who, with the pride of opiniontry, style themselves "conservative," and whose *Materia Medica* comprises a little of this and a little of that, a blunderbuss load of placebos administered with "expectancy," this statement, if believed at all, will be looked upon as little less than a crime; but to the true disciple of *Æsculapius*, to the doctor who occasionally saves life by taking the cure entirely out of the hands of Nature, it will appear logical, scientific, just. It will do more. It will set him thinking about the teachings of physiology on the sources of animal heat. It will do away with the furnace theory, the theory of combustion and metamorphosis of tissue. It will relegate to its proper place heat production, as well as other vital functions, to the central nervous system. The rapid changes in the vital processes can be accounted for upon no other hypothesis.

The cough, the gape, the twinge in the lips, the prickling in the toes, the electric flash up the spinal column, the cyanosed countenance, the evanescent headache, each and every one indicating a chill, as evinced by the rapid thermometric changes, could not be produced by causes acting extrinsically to the brain and spinal cord. And besides, the great organs of supply and waste, the stomach, liver and kidneys, the alimentary canal, all being in a normal condition, performing their functions in accordance with perfect health would preclude the idea of lesion, either organic or functional. The heart alone attempted to follow the erratic course pointed out by the ruling nerve centers.

In five seconds time after one gape or sneeze, its action would increase from ten to twenty beats per minute, and in the intervals of the toxic paroxysms its rythm would be as smooth and regular as in the finest health.

To watch her sleeping the quiet sleep of innocence and maiden purity, her countenance suffused with the glow of perfect health, lips tinted with the carnation hue of pure blood and active capillary circulation, pulse full and soft at seventy-five, skin moist, temperature normal and respiration full and uninterrupted; and to know that she was menaced by a fiend the most subtle in the earth, whose approach would be known by a cough, a gape or a sneeze; whose presence would darken for a moment the countenance, and whose machinations would set up such frightful irregularities as to awe the most stoical and callous practitioner. I say to see this is to get a glimpse of the pyrotechnics of death. To see a thermometer run 3° below normal, and in fifty minutes go 18° above normal, is to see the shadow of death itself. What is the explanation? "Can it be inflammation? Is it possible that this process can be extinguished and relighted—extinguished and relighted again so suddenly? Who can conceive of an acute and fatal inflammation of the mucous membrane of the stomach, with considerable appetite, or of the brain, with a perfectly sound intellect and without headache or other cephalic uneasiness? Inflammation, in a certain degree, may coexist with other phenomena, but it constitutes, in most cases, no portion of the danger, for all the difference between death and a speedy restoration to health, lies in a few (many) grains of quinia."—*Wood on Pernicious Fever*.

What is a chill? The "brunstane clootie" of Burns, the "cloven hoof" of the nursery?"

"Yea, this 'hangie' is a spirit—a heartless soul,
 Who, at his pleasure, can shape his form,
 To suit the company he keeps, and drain the bowl
 With bacchinalis; or, on occasion when the storm
 Of reverend furor sweeps away the self-control
 Of men, and leaves their minds only in alarm,
 At the horrid scenes depicted by the preacher,
 This chameleon sprite often dons the garb of teacher.

"This protean strength to demons only granted,
 By means of which, *incognito* they walk,

And hie to places where they're not wanted ;
 There, to physicians and others they talk
 Of knowledge, by quacks and mountebanks vaunted,
 'Gainst science and logic, endeavoring to mock
 Every effort at truth, as it comes through reason,
 Persuading even the doctor, that to think is treason."

On the 29th I received the following letter, dated Hollins, Virginia, January 27th, 1888 :

DR. N. B. HERRING :

Dear Doctor :—I write to give you some insight into the history of the present sickness of your daughter, who is a student at this Institute. She has now been sick for a little over a week. She first presented herself for treatment for neuralgic dysmenorrhœa. Her menstrual flow came on all right, and the pain from that cause has disappeared. She is now suffering from remittent fever. It is not making her very sick, but there is considerable soreness about the liver and the ileo-cæcal valve. Her temperature ranges from $97\frac{1}{2}^{\circ}$ to 103° . This is not morning and evening temperature, but is a kind of remittent temperature. She will have $97\frac{1}{2}^{\circ}$ about 9 o'clock in the morning, the temperature will rise to 103° about 10 o'clock and stay at that point until 1 o'clock P. M., and then fall to $97\frac{1}{2}^{\circ}$, and no more fever for that day. Quinine seems to have no influence in breaking up the daily return of fever. I have been giving her about 35 grains quinine in twenty-four hours. Her heart's action is good, and she does not seem to be very weak. Her tongue is moist and not much coated. Appetite is fair.

Yours, very truly,

RICHARD T. STYLL, M.D.

I answered this letter by return mail, stating that I could conceive of no pathological condition except intermittent fever capable of producing such symptoms, and advising Dr. Syll to anticipate the rise of temperature four or five hours by giving 30 grains of quinine in hourly doses of 10 grains each.

The next day I received the following telegram, dated 12 : 30 P. M. :

DR. N. B. HERRING :

Miss Lucy has Peri-uterine cellulitis. Temperature 108° . Would like you to see her.

RICHARD T. STYLL, M.D.

I telegraphed immediately that I would be there on the first train. Before the next train I received this additional telegram, dated 3 : 48 P. M. :

Temperature $99\frac{1}{2}^{\circ}$. Come to see her.

C. L. COCKE, Principal Hollins Institute.

I could only console myself a little by disbelieving the telegrams. On Tuesday 31st, at 9 P. M., I arrived at Hollins. Found the young lady in bed without fever, comfortable and bright as a dollar. Went to bed with instructions to wake me at 5 o'clock the next morning. Promptly at that hour I gave her 10 grains of quinine. In less than ten minutes she had a chill. I thought then I would determine for myself how it was acting, and, after giving her a small dose of calomel and podophyllin, commenced a thermometric investigation. The following report is accurately true, being recorded without delay as it occurred. After the second chill the record was made by keeping a thermometer constantly in the axilla, only taking it out long enough to note the change, which occupied about ten seconds each time. The thermometer was examined every five minutes, but only the changes recorded :

8:00	o'clock, A. M., February 1st, temperature,	99
9:00	" " "	106
10:00	" " "	$106\frac{1}{3}$
11:00	" " "	109
11:15	" second chill.	
11:30	" " "	97
11:40	" " "	$96\frac{1}{2}$
11:45	" " "	100
11:50	" " "	100 4-5
12:10	" P. M. " "	99
12:15	" " "	$99\frac{1}{2}$
12:20	" " "	$100\frac{1}{2}$
12:30	" " "	100 4-5
12:45	" " "	109
12:50	" " "	100 4-5
1:00	" " "	101
1:10	" " "	100 4-5
1:20	" " "	100 3-5

1:40	"	"	"	100 4-5
1:50	"	"	"	100 3-5
2:10	"	"	"	100
2:25	"	third chill.	"	97
2:30	"	"	"	97 4-5
2:35	"	"	"	100 2-5
2:45	"	"	"	100 $\frac{1}{2}$
		action on bowels.		
3:05	"	"	"	106
3:10	"	"	"	107 $\frac{1}{2}$
3:15	"	(pulse 150)	" more than	115
3:20	"	"	"	113 $\frac{1}{2}$
3:25	"	gave 10 grs. quinine.		105
3:30	"		"	100 4-5
3:50	"	gave 10 grs. quinine.		
4:05	"	perspiration, intense headache and active cerebral congestion. Gave 30 grs. bromide potas.		
4:10	"	morphine $\frac{1}{4}$ et atropine 1-100, hypodermatically.		
4:15	"	"	"	100 4-5
4:35	"	pulse 150. Gave 10 grs. quinine.		
4:45	"	pulse 154.	Temperature,	100 4-5
5:00	"	profound coma. Ice to head.		
5:30	"	wild delirium, amounting to mania. Temp, 60		
6:30	"	nearly rational. Said she was dying.		
7:00	"		Temperature,	98 $\frac{1}{2}$
7:20	"		"	99
7:30	"	gave 5 grs. quinine.		
8:30	"	gave 20 grs. bromide potas.		
10:00	"	gave 5 grs. quinine.		
11:00	"	gave 20 grs. bromide potas.		
11:20	"		Temperature,	98 4-5
11:25	"	fourth chill.		
11:35	"	"	"	99 1-5
12:00	"	midnight. Gave 10 grs. quinine.		
1:00	"	A. M., Feb. 2d, gave 20 grs. bromide potas.		
3:00	"	gave 10 grs. quinine.		
5:20	"	gave 20 grs. bromide potas.		

5:50	" fifth chill—very slight one.	
6:00	" gave 10 grs. quinine.	
9:00	" gave 10 grs. quinine.	
12:00	" noon, gave 5 grs. quinine.	
12:20	" P. M., sixth chill.	
4:00	" gave 10 grs. quinine.	
6:00	" bad headache and blindness. Mustard to nape of neck and temples. Gave 10 grs. antipyrin.	
8:00	" gave 5 grs. quinine.	
10:00	" gave 5 grs. quinine.	
8:00	" A. M., Friday, 10 grs. quinine.	
10:00	" gave 5 grs. quinine—blindness.	
11:30	" chill.	
12:00	" M., temperature,	99 2-5
4:15	" chill. "	100 1-5
7:15	" chill. "	99 4-5
8:00	" A. M., Sunday, temperature,	96
9:15	" " "	98½

From this time up to Tuesday morning 7 o'clock I attempted to reduce the quinine. From 7 to 8 o'clock I distinctly saw that death would end the contest sometime during the day if I did not push the quinine to the point of getting in between the chill and causing death from the remedy. I arrived at this conclusion from a very careful study of the malady during six days and nights, during which my undivided attention had been given to the case. On the Saturday before I had thought to arrest the paroxysms by additional aids to the quinia salts. For two days I had alternated the quinine with chinoidin and cinchonidia sulph., given arsenic and tinct. iron in large doses every four hours, and had only succeeded in bringing down the chills to regular intervals. One hour and a half before the time for it on Saturday evening I had her placed between the blankets, put bottles of hot water all around her, and forced her to drink large quantities of hot sage tea. She soon broke out in a profuse perspiration and laughed at the ridiculousness of her situation. In this condition, with her pulse at 75, temperature normal and no more sign of disease than the most perfect health, the chill came with a flash up the back, tingling in the lips, a dark shade over the countenance and a momentary headache. The damage was done all in a moment, and the treatment was a failure. I felt very much

discouraged, and then thought perhaps I could wear them out with teasing doses of quinine, these teasing doses being from 60 to 80 grains per day. On Tuesday morning, it being the seventh day since the terrible ordeal of the previous Wednesday, between 7 and 8 o'clock she had three distinct paroxysms, each one with a lowering of the temperature from 2 to $3\frac{1}{2}$ below the normal, and each one with a cough, gape and cyanosed countenance. The temperature had been held down below 100 since the large doses of quinine had been commenced. I felt that if the evening was allowed to come without an interruption of the paroxysms she would surely die. The question was then centered down to one thing alone—QUININE. How much can she bear without killing her? Between arresting the chill and death was a very short space. That space must be filled with the remedy. We had ceased to consult books. Our experience was then worth the combined experience of all the medical world besides. We had passed way by the danger limits. We had observed that every time she complained of blindness all her other symptoms were better. Only a moderate degree of deafness had been produced by the largest quantity given. Flint's case, where total deafness and blindness had been caused for eight hours in a man from the administration of 2 drachms in twenty-four hours, had no influence to deter us from what we did. Our objective point was total blindness. Here is what it took: From 8 to 9 o'clock, 12 grains; 9 to 12, 10 grains; 12 to 6, 70 grains; 6 to 8, 6 grains; 8 to 12, 16 grains; 12 to 6, 24 grains; 6 to 8, 6 grains. In all, 144 grs.

At 6 o'clock P. M. she was stone blind. I held a bright lamp close to her eyes and she just could distinguish it. The blindness began to go away in less than one hour. The paroxysm was interrupted and a life was saved. From this time up to Sunday, the 12th, when I left Hollins, she took 96 grains quinine every twenty-four hours, continuing to get better every day. On Friday, the 10th, she sat up nearly all day, and on the 11th went to the dinner-table and ate her dinner. The walk and excitement raised her temperature to 100°.

On leaving her at school I acted, for the first time, against my judgment, but considering her safe by a continuance of the treatment, I was prevailed upon to leave her. From this time up to the 25th February, the day she got home, extracts from correspondence, in the order of their dates, will throw the greatest light upon the

case. She writes under date of 13th: "After you left yesterday I was taken with a very severe headache, and in the evening had another chill, but I think it was the slightest one I have had yet. This morning my head is a great deal better, but have a very bad back-ache. I didn't cough any last night. Dr. Styll has increased the quinine." In her letter dated 14th she says: "You wrote for me to take apiol capsules when I expected to be sick. I was taken sick yesterday and suffered a *great deal* with my back. I don't think I ever had as sharp a pain as I did all day yesterday. I had another slight chill, but Dr. Styll increased the quinine immediately. I haven't coughed any in the night since you left—cough a little every day about the time for my chills. Dr. Styll has stopped the iron and said I must not take the pills you sent me in three or four days. I have very little headache now. You wrote for me to take the iodide, but the doctor said I must not take that either yet—said you would understand why." 15th: "I received the box of medicine this morning. Dr. Styll said I must not commence on the iron pills in three or four days longer. He stopped the quinine last night entirely and is not going to give me any to-day. I suppose the reason is because I was so weak. I think I was weaker yesterday evening and last night, than I have been since I have been sick. I feel a great deal better this morning, and have not had any more chills. I commenced on the iodide this morning. Dr. Styll puts fox blood (?) in it. Miss Tinsley said he gave it to regulate the action of my heart." 16th: "I wrote yesterday that Dr. Styll had stopped giving me quinine, but last night about 7½ o'clock I had another chill and my fever went up to 104. I didn't have any headache with it at all. Dr. Styll said he would write to you to-day. You must not be uneasy about me, for I am feeling better than I have since I have been sick."

DR. STYLL'S LETTER.

"*Dear Doctor*:—I send you this as a report of your daughter's sickness since you left Hollins. After your departure she went to her own room. About 5 o'clock in the evening I went to see her, and found her with chill and headache. Temperature 97°. I sent her back to the sick room, and gave 10 grains quinine every two hours. The following is the thermometric record since: Monday, 13th, 8:45, 98½; 9:45, 97½; 10:15, 97½; 10:45, 99 1-5; 11:45, 98½; 12:45,

96½; 12:55, 99½; 1:15, 98½; 4 P. M., 98; 5 P. M., 99. Kept along about the same till Tuesday, 14th, at 10:45 A. M., when it fell to 95; 11 o'clock, 99; same till 3:15, 96 2-5; 4 P. M., 99 2-5; 5 P. M., 97; temperature remained at this point till 8 P. M. Tuesday, 14th. Though there was no blindness nor deafness, there was such a persistent lowering of temperature, such weakness of circulation and such a sensation of general weakness that I feared collapse, and deemed it unsafe to give more quinine. I ordered two teaspoonfuls of whiskey every two hours with 3 grs. of monobromated camphor. Severe pains in back and back of head. Wednesday, 15th, 7:30 P. M., temperature fell to 95—chill; 8 P. M. 104; 10 grs. quinine every two hours resumed. Temperature soon went to below normal and remained so. To-day's record up to this writing (7:35), 96½, at which it stood till 8:30, when it went to 99 2-5, where it stood till 9:50, when it fell to 94 2-5.

Her catamenia appeared Monday about 2 P. M.. I attribute part of the lowering of temperature to its presence. I gave no apiol because catamenia is normal. Discontinued iron on account of catamenia. I have given her the whole of ounce of quinine you left. I don't like the persistent low temperature. I begin to suspect that, whilst malaria was the primary trouble, we have more than that to deal with.

"Yours, very truly,

R. T. STYLL."

I answered this letter immediately, and insisted, in very earnest language, upon a continuance of the quinine without interruption and regardless of symptoms. From what I knew of the case and from this correspondence, I thought I could see that causes were attributed to effects and effects to causes that had no existence. From a further study of the case I am still more confirmed in this opinion.

On the 17th she wrote as follows: "I know you are tired of my writing about my having chills, so this morning I can say that I didn't have any symptom of one yesterday, and feel better to-day than I have since you left. Don't have any headache, but am not entirely well of my cough. I saw in the paper this morning that Mrs. Wash. Taylor was dead. It got me so excited over myself that I imagined I was going to die immediately."

Dr. Styll, on a postal, wrote same day: "Miss Lucy is much better to-day than any time since her sickness. I think low temperature is due to catamenia and quinine."

18th: "Miss Tinsley persuaded me to telegraph to you this morning—said she was afraid you would be uneasy about me after getting Dr. Styll's letter. I am a great deal better this morning, and expect to go over to my room this afternoon. I have been sitting up all day. Haven't had a chill in two days. I have been very much worried all the morning after receiving your letter—I am so afraid you will make me go home. Now, I don't want you to think that I am not writing everything about myself because I don't want to go home, for I certainly am." (She was trying for the music medal.)

To her mother, on the 20th, she wrote: "I am getting on splendid now, and I will soon be as strong as ever. Pa was very anxious for me to go home, but I thought it better for me to remain at school."

A postal card from the nurse of same date said: "Although Lucy has written, I think it is best to write too, to let you know how she was yesterday. She seemed better in the morning and was up and dressed. Her temperature was $98\frac{1}{2}$ up to 10 A. M., when it went down to 95; then it went to 101; at 12:45, 95; at 1 P. M. 105; at 1:30 it was 107; at 2:15 it was $99\frac{1}{4}$; at 2:30, $98\frac{3}{4}$; fifteen before 3 106; at 3:15, 99. After that it remained about normal. This morning she does not seem as bright as usual. Her temperature has been normal (so far 12:30) this morning. Her pulse was 140 at 1 P. M. yesterday. N. TINSLEY."

On the 21st she wrote as follows: "Mr. Cocke came up this morning and said you were such a positive man that he didn't know what to do about my going home. I am not having chills now, but my temperature is not right yet. Dr. Styll says I am doing better now than I have since I have been sick. Mr. Cocke seems to think that you want me to go home immediately. If I get any worse I want to go, but I am getting better every day. My temperature went up to 107 and my pulse to 140 Sunday, but that was because I exerted myself entirely too much."

Another letter from Dr. Styll, dated February 21st, says:

"*Dear Doctor*:—Yours of the 19th inst. was received by to day's mail. I have not at any time thought there was any other etiological element in Miss Lucy's case than malaria. The remark I made was

entirely in reference to pathological conditions. I believe that all of her present trouble is due to a disorganization of the cerebro-spinal substance; a pathological condition so well described by Councilman in his record of results obtained by him in his researches into the pathology of malaria. As to the suspension of quinine, I thought I had fully given you my reasons for that step in my last. The suspension was only for a sufficient time for a reaction from the profound depression which the quinine had produced. I verily believe had I given her another dose at that time she would have been beyond the reach of further medication. As soon as reaction was fully established I returned to quinine, and have steadily kept it up ever since. The 104° on Wednesday was not due to suspension of quinine. She takes iodide of potass and iodide of iron pills just as you suggested in your letter. She is allowed to eat anything she wishes. She has had no chill for a week to-day. I assure you there has been nothing neglected in the management of the case since your departure. It is my opinion that she is surely and rapidly establishing a convalescence. As to allowing her to go out anywhere she pleases, I must say I do not approve of that line of practice in this case. My reasons for not approving this is that the damage done her nervous system has been so severe that she is not able to stand the tax she wishes to put upon herself, and I am not willing to run the risk of syncope involved in the indulgence. The following record will give you some idea of the impression such an indulgence makes upon her: From Wednesday until Sunday her temperature ranged from 97½ to 99, with pulse between 80 and 90. Sunday, A. M., I decided to allow her to go to dinner. She dressed herself early Sunday morning. At 10 A. M. her temperature went down down to 95; at 12:45 it was 101; at 1 it was 105; at 1:30 it was 107; her pulse was 140. I put her back to bed. By 3:30 she had gotten back to her condition previous to getting up, and has steadily improved ever since. At this writing her condition is perfectly normal. I must insist upon giving her nervous system a chance to reestablish itself. If there is a well-established principle in therapeutics it is the necessity of rest in cases of impairment of the nervous system.

“Yours, very truly,

“RICHARD T. STYLL.”

I now determined to have her come home, and sent her brother

immediately for her. They arrived at home on the 25th at 4 o'clock P. M., and just as she entered the house had a severe paroxysm before she had time to take off her wraps. I prescribed 10 grains quinine every three hours and 30 grains bromide sodium every four hours with morphine hypodermically. On Monday, the 27th, I used one of Warner & Co's hypodermic tablets of morphine in biceps muscle of right arm. She grew rapidly worse, and I began, for the first time, to doubt the propriety of the plan of treatment. I had never yet had a clear conception of the pathology of the case, but my confidence in the remedial virtues of quinine, and its power to finally triumph over the morbid process, was almost that of blind faith. In fact, it was the only remedial measure in which I could place the least confidence. As she grew worse doubt took possession of my mind, and the torture of indecision, with death staring me in the face, rendered my position more unbearable than the terrible Wednesday when I first saw her at Hollins. What could I do? Call a consultation? I did not want it. I knew more about the case than any physician I could get. The wild and erratic movements of her temperature, the protean forms of all her other symptoms and the frightful changes from apparent health to the verge of death, so rapid and so irregular, could but render confusion worse confounded. In this unhappy state of mind I could think of nothing else. I was afraid to leave her for an hour, yet it seemed I could do no good by staying with her. My remedy had failed and my faith was dead. Beyond the limits of my own knowledge evidence becomes inoperative, and the marvellous fails to attract or console. I am aware that medical practice, in its very nature, is empirical to a great extent, but there are underlying principles which no properly taught physician can ever repudiate; so, in the extremity of my resources, I appealed to a higher court, and the verdict enlightened, if it did not exonerate me. I wrote to Dr. Hammond, of New York, stating the case pretty fully. In the meantime, I asked my friend Dr. C. E. Moore to visit her, which he did, and spent a good deal of his time for a week at her bed-side. We decided to thoroughly narcotise her with opium and bromide. Under its influence she slept most of the time for two days and nights, growing worse all the time. She ceased to eat, and an alternate spastic and paralytic condition seemed to pervade her whole body. One side of her face would be red and hot, the other pale

and cold. Her eyes would be red and burn like fire for a few minutes, and we often counted her respirations 50 to the minute. Her pulse would range from 66 to 150. I have seen a scarlet redness in her throat, involving the whole pharynx, which lasted only ten or fifteen minutes. Her tongue would have a dirty white, or thick yellow coat on it, and in half an hour be clean, with all the appearance of health. General prostration would be so complete at times that she felt almost too weak to breathe, and in one hour she would want to get up and dress. A sensation of dropping in the right ear has annoyed her at times very much. Her cough has presented all the types of every lung disease. Bronchitis has been simulated over and over again. Intelligent physicians have insisted on its existence, and nothing but watching at her bed-side has dissipated the delusion. Her tongue was black as ink one morning and resumed its natural color during the day. The explosion of a bottle of fermenting mucilage on the mantle-piece carried her pulse up to 160. A sudden ray of sunshine projected into the room one cloudy day, caused her to gasp for breath, and ran her pulse up so high she could not count it. She observed to me one day that everything worked like her temperature. She eats heartily, has lost no flesh, sleeps well and looks as well as she ever did. She has become an expert at noting symptoms, counting pulse and taking temperature.

On Wednesday, the 29th of February, her temperature went down to 94° and remained there over an hour. This was in the forenoon. That evening it went up to 115° or more, and stayed half hour. On the 1st day of March, at 9 o'clock P. M., a Hicks thermometer that I had been using three years, the scale of which numbered 115°, and the bore, at least two degrees above the scale, with the bulb in the axilla, *burst from the heat of her body*. The column of mercury was at the very top of the tube when she took it away, showing that the bulb gave way under the pressure of the expanding metal. This high temperature lasted only four or five minutes. She said that she felt like she was burning up, and thought it would have killed her in a short time. These fluctuations of temperature produced all sorts of trouble. They destroyed the appetite, caused restlessness, wakefulness, mental depression, and were always succeeded by the thousand-and-one symptoms so characteristic of the hysterical state. But, unlike the phenomena of hysteria, they pro-

duced the impression of imminent danger to vital structures. No one could witness them without fearing disorganization and speedy dissolution. Like the oscillations of a pendulum, where an added force is applied at each reciprocating motion, it appeared to be only a question of a little more time and a little more force to extinguish the vital spark forever. On the night when the thermometer gave way to the excessive heat I verily believe that her powers of resistance had reached their extreme limit, and one more paroxysm, with the same ratio of increase, would have closed the scene in death; yet, strange as this assertion may appear, after this terrible experience my spirits were light, my confidence restored and my dead faith resurrected.

She had swallowed little or no quinine since her return home. This I found out on the 1st day of March, and this was the key to the cause of her rapid decline. At 11 o'clock P. M., two hours after the thermometer broke in her arm-pit, I gave her, and *saw that she swallowed it*, 10 grains of the salicylate of quinine with 5 grains chinoidin in powder. Two hours after she took 10 grains sulphate quinine, and these doses were kept up alternately, each every four hours, until Friday, the 9th. On Monday, the 5th, in addition to the quinia salts, she took 5 grains resorcin every three hours. On the 6th I received the following letter from Dr. Hammond, dated New York, March 24th:

Dear Doctor:—Absence from the city has prevented an earlier reply to your letter. * * * I think the morbid process is centered in the sympathetic system, and that it consists of an alternate spastic and paralytic condition of the vaso-motor nerves. I have never seen so extraordinary a case as that of your daughter, but I have seen several similar ones, and they were cured by the remedies I am now going to mention. First, I would give her 7 grains of antifebrin or 10 grains of antipyrin every four hours until four or five doses are taken. Second, give at once 100 grains of bromide of sodium dissolved in half tumbler of water, and repeat it in two hours unless she sleeps or the paroxysm is arrested. After that I would give 20 grains of the bromide of sodium four times a day until she is thoroughly under the influence of the drug. Third, apply a blister to the epigastrium immediately over the solar plexus. It might be well, also, to apply one the whole length of the spinal cord so as to act upon both the sympathetic nerves.

These may seem to you like strong measures, but the disease is such as to require very active treatment. At the same time I do not think you need be greatly alarmed, for I am sure there is a strong hysterical element in the case. She may die, or, for all I know, she may be dead now, from exhaustion. *But I do not think so.* I shall be very glad to hear from you again and receive good news in regard to the case.

I think you might cut short an attack, or rather entirely prevent it, by giving the nitrite of amyl by inhalation—5 to 10 drops being rubbed between the hands and held to the *mouth* so she will inhale it quickly.

Yours, sincerely,

WILLIAM A. HAMMOND.

On Friday, the 9th, she being much better, I changed the medicine to salicylate cinchonidine 10 grains and sulphate quinine 5 grains in one dose. This I gave every four hours, alternated with 10 grains resorcin. There had been no more fluctuation of temperature above or below normal until to-day, when it stood $100\frac{1}{2}$ for six hours. All this week her arm, into which I injected Warner & Co's tablet, had behaved as strangely as her temperature and other symptoms. It was inflamed and painful at times, and at others it would seem to be getting well. The swelling would nearly all subside, the pain and redness would fade away, and for several days I was in doubt as to its being inflammatory or neurotic. I had given her some irregular doses of antipyrin prior to this time, scarcely knowing why, but after receiving Dr. Hammond's letter I determined to fully test its efficacy. Accordingly, on the 10th, at 8 A. M., I commenced with 10 grain doses and repeated every four hours, slacking up the cinchona preparations without entirely stopping them. At 6 P. M. temperature 101. Gave resorcin and antipyrin only.

March 11th, temperature at 6 P. M., 102.

“ 12th, “ “ 103.

“ 13th, “ “ 104.

This trial satisfied me that the antipyrin would not control her temperature, so at 12 P. M. of the 13th I resumed the quinine treatment, 15 grains every three hours. She had suffered very little with her arm during the whole time she was taking the antipyrin, but

after that was stopped she began to suffer an intense burning; throbbing pain, with a sensation of something sticking.

On the 13th at 4 P. M. I lanced the abscess and a small quantity of thin white pus escaped. That night her arm was so painful that I gave her $\frac{1}{2}$ grain morphine without her feeling the effect of the drug or any mitigation of the pain. After two hours waiting I resorted to irrigation with very hot water, which relieved during the application, but not a moment later. It had not for a moment occurred to me that antipyrin could relieve the pain of an abscess, and in sheer despair I gave her a 10 grain dose. She went to sleep in thirty minutes. After that it never failed to relieve the pain and stop her cough promptly. I have since found it to relieve the pain of a felon with the same promptness. The abscess discharged an immense quantity of matter and finally healed without doing any permanent danger. During the first week of March I made two applications of very hot water to spine, but it was done each time when her temperature was down to 94° , and it made her very weak and sick at the stomach. She was very much opposed to the remedy, and I did not insist upon it any more until the third week, when I made the application daily for eight days. The quinine treatment had been carried on about the same way, and she was better and worse just as the quinine was increased or diminished. My notes state the last dose was taken at 6 P. M. on the 21st. Nothing but bromide since, 40 grains every four or five hours. On 22d, at 10 P. M., suddenly waked up with difficulty of breathing and cold all over, but no fluctuation of temperature; on 23d, at 10 P. M., similar paroxysm but not so bad. Considerable spasmodic action about hands, arms and chest muscles. Commenced with mild tonic and whiskey—(elix. iron, quin. and strych.) Appetite better on Saturday. Sunday, 25th, slept cold the night before; 10 A. M., temperature 102. Ate no breakfast; evening temperature 103. Commenced quinia preparations again. Aching all over like old-fashioned intermittent fever. On 26th slept well all night, feels better and wants to sit up to write letters. Dr. Kirby, of Goldsborough, came to see her and saw her temperature go up to 108 at 6 P. M. After getting particulars of case and treatment, he advised me to give 30 grain doses of quinine night and morning. She was so bitterly opposed to any increase of the quinine that I deferred to her whim until Sunday, April 15th, when she affirmed that the quinine was killing

her, and that if I would stop the medicine and let her sit up, she would be well very soon. I knew she had the cart before the horse, but I thought I might convince her without running too great a risk, and accordingly stopped all medication and let her do as she pleased. Three days satisfied her, and she has raised no objection since. Wednesday, 18th, temperature 106 for three-quarters of an hour, with severe pains in knees and eyes. At midnight commenced with 20 grs. every eight hours. On 21st temperature 107½ in evening; 22d 103 in evening; 23d 25 grains every eight hours; very hoarse 20th and 21st; ate nothing but apples and bananas the three days she was sitting up and taking no quinine. Wednesday, 25th, 30 grains every eight hours with 10 grains antipyrin; had to stop bromide on account of acne. No more temperature above 100, and that only every two or three days. I wrote a second time to Dr. Hammond, giving him a detailed account of the case and enclosing her's and Dr. Styll's letters. An extract from his letter, dated March 28th, says: "I think you have acted with great discretion throughout the whole of your trouble. * * * I enclose you the letters. They are sufficient to vindicate you completely." Mentioning Dr. Styll, he said: "I should judge him to be a very intelligent man."

This compliment to Dr. Styll is nothing more than he deserves, and I desire here to pay my respects to him as a physician, a gentleman and a Christian. I deem it important in the discussion of this most remarkable case to quote his last letter in full:

HOLLINS, VA., April 3, 1888.

DR. N. B. HERRING:

Dear Doctor:—Yours of March 31st is to hand. I have felt great interest in the case of your daughter, and must confess to quite a disappointment in not hearing anything as to the progress of the case since she left this Institution, but I have attributed your not letting me hear from you to your necessarily anxious condition of mind and to your being too busily engaged to write. I am glad you wrote to Dr. Hammond, and would like very much to see his letters to learn his reasons for thinking the seat of the disease is to be found in the sympathetic nervous system. With the patient before me, and observing all the phenomena in the case, I am somewhat disposed to disagree with him in locating the lesion. I rather think the disease is to be found in the cerebro-spinal system. I will as briefly as possible state

my reasons for differing from the conclusions of so eminent a neuro-pathologist as Dr. Hammond. It is a well-known fact that the sympathetic system of nerves presides over secretion as well as the circulation. Therefore I think that an alternate spasm and paralysis of these nerves, so extensive as to produce a fluctuation of temperature ranging from 95° to 115° , would most certainly produce some derangement of the secretions probably of equal fluctuation as temperature. This we know was not the case with our patient. In this case if there was paralysis and spasm of the sympathetic system of nerves it was general, and the whole sympathetic system was under some powerful influence, but I believe the influence was outside of the sympathetic system, and was exerted upon, and not by, it. It is a well-known fact that if the sympathetic nerves supplying any part of the body are severed the temperature of that part will rise several degrees; but that rise of temperature will be because of a dilatation of the capillaries of the part and the consequent increased flow of blood in the part; and it will certainly be attended by an increased redness of the part. Now we know there was no such phenomenon as capillary congestion of the skin, nor anywhere else except in the conjunctivæ in this case. Unless the paralysis of sympathetic nerves was general, the rise of temperature could most certainly have been localized. In forming our opinion in regard to this point raised by Dr. Hammond we must bear in mind the fact that each ganglion of the sympathetic system is reinforced by filaments from the cerebro-spinal system of nerves, and that the influence that one of these great systems has on the other is but little understood. We know that in some instances it is decidedly antagonistic. To my mind the absence of capillary congestion alternating with anæmia of the skin, and the absence of secretory derangement throws a decided doubt upon the correctness of Dr. Hammond's conclusion. Is it not more reasonable to suppose the lesion to be in some heat-producing center near the vital centers, and that the sympathetic system receives its impression from thence than to suppose the whole sympathetic system to be diseased at one time? This phenomenon of rise and fall of temperature was not the only phenomenon present. It seems to me that the effect on the heart, the nervous cough, the appearance of the eyes, the acute mania, the pain in the head and along the spine would at least cause a suspicion to be cast upon the cerebro-spinal system as the seat of the disease.

"I shall call your attention to the well-known fact that Entenberg and Landois have discovered in the anterior part of the cortex cerebri, a center, the destruction of which causes a rise of temperature of several degrees in the extremities of the side opposite the lesion. Dr. Isaac Ott in the December 10th, 1887, number of the *Medical News*, states that he has recently discovered in the cortex cerebri, at the junction of the super-sylvian and post sylvian fissures, a center which, when mechanically destroyed, causes a rise of temperature over the *whole body* of four or five degrees. He also states that the weight of the animal operated upon is but little affected. Now, if this be true (we have no cause to doubt it), and if we take into consideration the discoveries of Councilman, we have no further to go for an explanation of the phenomena we have witnessed in our case, for we have the heat-producing center, and we have in abundance an instant capable of exciting in the highest degree the peculiar function of this center. If Entenberg and Landois have discovered one heat-producing center in the brain, and Ott another, the number remaining undiscovered no man can tell. (See Councilman's paper in the *American Journal of the Medical Sciences*, April, 1885.)

"Now, if my theory as to pathological conditions in this case be correct, the rationale of treatment ought to be plain. The most important indications are to support life and to abort this abnormal substance, also to give tone to the weakened capillaries and general circulation. Besides the specific remedy for malaria, I would recommend ergot and the iodide of potash in large and frequent doses.

"Admitting Dr. Hammond's theory to be true, ergot, by its tonic effect on the capillaries, would be the most important remedy indicated. Its stimulant effect on the vaso-motor nerves explains the good effect of quinine in the case. * * * There never was but one point in your management of the case in which I differed with you, and that was in allowing her to leave her room, thereby taxing an already badly injured nervous system beyond its powers. I am still of the opinion that that was unwise. I hope you have kept notes of the case and will give the profession the benefit of this unusual experience by publishing its history.

"Yours, very truly,

"R. T. STYLL."

In my extremity in the early part of March I consulted my friend Dr. O'Hagan, of Greenville, in about the same manner I did Dr. Hammond. An extract from his letter reads as follows: "The case of your daughter is certainly one of the most remarkable on record, at least with regard to the extraordinary height to which the temperature rose and the extraordinary fluctuations thereof. It is a case which will interest the whole profession, and ought to be reported in full, which I hope you will do. I know so little about the case that I am not warranted in expressing an opinion; but I cannot help thinking that the case is to be regarded as one of localized cerebral congestion in the basilar portion of the brain. Physiologists are disposed to localize all functional action in certain nervous ganglia in certain portions of the brain, and the heat-producing ganglia are located in the superior portion of the medulla oblongata. It is possible that some congestion of these parts might have much to do with the wild and erratic movements of the temperature. At any rate I would try blistering along the spine, and if that did not benefit her, I would try ice-bags to the spine. I think you have tried physic pretty fully, and that a rest from all drugs would be in order. * * * But the case must be near its termination. No organism, human or other, can stand such fluctuations in temperature. Write me again.

"C. J. O'HAGAN."

My faith having returned before receiving this letter, I had sat down to a square hard pull with quinine, and I have been at it ever since. I have no confidence in anything else, not even as helpers. She has swallowed over 6,000 grains since the 14th of January, is now taking 30 grains at a dose every eight hours, is comfortable, looks well, eats well, and *I believe is getting well.*


SALICYLATE OF SODIUM.—It is asserted that considerable quantities of this salt are now offered which contain much more sodium than is necessary to make the salt; in other words, a large amount of uncombined carbonate or bicarbonate is present as an adulterant.—*American Practitioner and News.*

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

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THOMAS F. WOOD, M. D., Wilmington, N. C., }
GEO. GILLET T THOMAS, M. D., " } Editors.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

SOME THINGS ABOUT THE REPORTING OF THE LAST MEETING.

The reporting of the last meeting was very well done, although under the numerous difficulties which arose from the ignorance of the short-hand reporter of purely technical terms, and there were some omissions. The Secretary fortified the reports by supplying each member with a card upon which to write out his remarks, to be used in the revision of the minutes. We are sorry that one or two speakers were entirely left out, because they failed to return their cards to the Secretary. If speakers will bear in mind the large quantity of work

to be rapidly and accurately recorded, they will appreciate the necessity of aiding the Secretary, and, in fact, be afforded the opportunity of indulging in that which our French friends phrase *esprit d'escalier*—a not very rare method of spicing cold speeches.

ALL YOUR EGGS IN ONE BASKET.

On a recent visit to a neighboring town a friend, pointing to his visiting list, said: "All my work of the year is in that little book." It recalled to the mind of the writer the misfortune which befel a friend who, carelessly trusting his year's work to his pocket visiting list, lost it, and nearly beggared himself. We believe that such unbusiness-like habits possess the majority of our profession, hence the advice which we intend to convey in these lines.

THE CLAY EATERS—ARSENIC EATERS OF NORTH CAROLINA.

Our esteemed contemporary, the *Indiana Medical Journal*, says that "Dr. F. H. Getchell, of Philadelphia, says that the clay-eaters of Central North Carolina should be called arsenic-eaters, as the clay which they consumed with such avidity contained a large portion of arsenic." We thought that this old and revamped story had been understood as a hoax. Dr. Getchell was made the subject of a merciless hoax by a North Carolina Yankce, at Salisbury, allowing himself to be stuffed with the most preposterous statements, which we are surprised he did not have the wit to resist, and further, the story goes that the wag who was so successful in giving Dr. Getchell such a marvellous yarn from the back-woods of North Carolina succeeded in palming off a worthless bird-dog on him at a huge price. We are not responsible for the scamps in our State, nor are we averse to any discoveries of the wonderful sort being made, by visitors, but when the stories assume a scientific garb, we like to see that there is the necessary truth as a foundation. If Brother Ferguson will come over to Salisbury or Greensborough, and move about in that region, he will find the old home of many a good old-fashioned Quaker who has helped to build

up Indiana, and if an unmarried man, he could not do better than make a selection of a wife there from among this very people.

The story attributed to Dr. Getchell does not credit him with very keen scientific insight, and we are not sorry to demolish this old yarn by a denial in toto of its verity. We do this upon the authority of a venerable physician of Salisbury, who put himself to the trouble to investigate the origin of the hoax. Dr. Getchell can get his address from this office if it is a matter of any interest to him to pursue his inquiries in this direction any farther.

DO YOU DEMAND THAT STUDENTS IN YOUR OFFICE HAVE SUFFICIENT PRELIMINARY EDUCATION TO BEGIN THE STUDY OF MEDICINE?

The above question we propound to every doctor practising medicine in this State, and we will be pleased to have the answer, and when all replies are received we will give the summary to our readers.

Please answer: 1. Have you a student or students in your office? 2. What do you consider sufficient preliminary education? 3. Do you always examine the student as to his qualifications, and do you advise him accordingly? We would like to have your name signed to your answers, not to be made public, but for assurance of good faith.

North Carolina is taking the lead in the educational requirements of her physicians, and it is highly necessary that we should begin at the very foundation of the career of doctors. We have no medical school to trammel us by its influences, and the time is especially auspicious for us to build sure and still surer foundations. The demands of our profession are yearly more exacting, and we must aim still higher until we attain a point at which we can say, truthfully, that the standard of medical education in our State is one of uniform thoroughness. It will probably take a quarter of a century to bring this about if we are diligent in executing the law the State has entrusted to us, but we are getting foretastes of the good day, and it will surely come.

To return to our original enquiry, we want to know how the doctors generally are carrying out the resolution of the Society that we will admit no one into our offices as medical students who have not sufficient preliminary education.

THE MEDICAL SOCIETY OF NORTH CAROLINA AT FAYETTEVILLE.

We gave in our May issue the entire proceedings of the meeting of the Medical Society, delaying our impressions of it until a month had passed. We believe our first impressions are correct—that this was the best meeting we have had during all the eventful years of our existence. We realized the fruitage which we have looked for after so many years of anxious sowing, and adjudge the fruit good beyond reasonable expectation.

The profession of Fayetteville and the citizens united their efforts to make the visit of the members of the Society pleasant and profitable, and their success was complete. For the first time in the recollection of the writer the President of the Society presided in his native town, and we noted with what pride the citizens witnessed the sight of one of their own physicians, heretofore only identified in their minds as a minister to their bodily ailments, and the friendly adviser, presiding over a large assemblage of his peers with dignity and delivering his address with the manner of a practiced speaker. The substance of the address we present in this issue, and wish it had a larger audience than the medical profession. The crying needs of the poor insane was presented with singular pathos and earnestness, which must touch the hearts of all who read it. As earnest as the speaker was, he did not overdraw the picture, in fact, he left out some of the more sombre colors, and he spared those in authority the minuter and more shameful details of their fatal negligence.

The Board of Health have reason to thank Dr. Haigh for the word in season spoken in behalf of their work, and we believe a new impetus has already been given to the prosecution of County Boards which has begun to be demonstrated since the members have returned to their homes. Unity, regard for the Code of Ethics, and better education will combine to give shape to work which has been forecast with wisdom, we trust, and the Board of Health will be enabled to pass beyond the elements and ascend to a higher plane of work.

We agree most heartily in the confidence expressed in the younger members of the Society. It is a pleasure to record our confidence in their loyalty to the Society and its auxiliaries, and our thankful-

ness that the work that we must ere long lay down has a bright future in the hands of better educated physicians.

The JOURNAL is grateful for the renewed manifestation of interest in its career. At no time has the list of subscribers been so largely increased, and its prospects as bright. To old friends and new we desire to convey our thanks, and bespeak their cordial co-operation for the next year. The past year there were more original communications from our own doctors, and we predict a large increase this year.

The papers presented at this meeting were of unusual merit, and although the committees appointed to make awards for the Society and the Pittman prizes did not think any worthy of such marked consideration as the awards offered, we believe their impression is that the standard for such papers ought to be higher, and if they had been of no higher grade than those offered last year the award would not be made, the special request of the endower of the award being that a higher quality should be required.

An abiding faith in the constantly increasing desire to foster all work which will redound now and in the future to the interest of the Society leads us to seek to inspire in the younger members, who are rapidly and properly assuming the control of the organization, an appreciation of the fact that a wise conservatism has been the well-spring of the success which meets them upon entering the Society. There is no ambition more laudable than to strive to attain to the higher offices which the Society yearly bestows; but there is danger to the peace of our household if the restless longings of any of the members for preferment shall lead them to persuade their friends towards radical changes in the organic laws that are now so satisfactorily doing the work of the Society. The long line of presiding officers, the faithful servants of the Society in every official capacity, bear ample testimony to the all-sufficiency of the present statutes. It will be a dark day in our honored body when, in lieu of scientific and literary work being the uppermost thoughts in the minds of the members, there shall be the dissevering and blighting influences that follow so certainly upon the introduction of politics and electioneering into an organization such as ours.

The senior editor desires to express his grateful acknowledgments for the touching manner in which he was welcomed back to his place in the Society. It seems to him that but few men have been honored

with such warm friendship, and he trusts that his renewal of health will enable him to strive to deserve it more.

In conclusion, it is highly gratifying to know that our large Society is not disturbed by factions, and the one impelling force which animates the whole body is the ambition to rise higher and still higher in the scale of scientific life, and maintain the honor and dignity of our ancient craft.

WILMINGTON QUARANTINE.

We had the pleasure of receiving a visit to our city from Dr. John D. Jones, President of the Board of Health of Ohio, and Dr. Benjamin Lee, Secretary of the Board of Health of Pennsylvania. These gentlemen were appointed by the Conference of State Boards of Health a Sub-Committee, to visit the quarantine stations from New York to the South Carolina line, while to others were allotted the inspection of other States, including the Pacific coast, so that the entire coast of the United States will have been inspected by delegates from this body. The editors of this JOURNAL, being members of the Quarantine Board, accompanied the Committee to the mouth of the river, and, with the aid of Dr. W. G. Curtis, the Quarantine Officer of the port, laid before the gentlemen our condition. The Quarantine Officer resides at Southport (Smithville). He is appointed by the Governor of the State, and the consulting members who reside in Wilmington are appointed by the President of the North Carolina Board of Health. The rules and regulations of the quarantine are promulgated by this Board, and all pilots are instructed as to the ports which are interdicted, and the penalty of neglect of the rules in not bringing vessels liable to inspection to the quarantine station is the loss of his "branch," that is, his commission to pursue the business of a pilot. The quarantine station is located about three miles distant from Southport, and twenty-five miles from Wilmington.

The Quarantine Hospital was burned down six years ago, and has never been rebuilt. The building and a few acres on which it stood belong to the State. All that is now lacking to make our quarantine the best is a small hospital, a wharf extending out from it to

the channel, a stationary engine on the wharf, to be used in pumping out and disinfecting vessels and hoisting out cargoes, and a warehouse for the merchandise of cargoes.

These items were surveyed and considered by the visiting Committee, and their report will include such matters as will inform the public of our condition, and from this to the remedy there is but a short step.

It looks very well on paper to have all quarantines under the control of the General Government and have a good slice of the large surplus turned over to the Cape Fear River quarantine, and so make it worthy of this great country, as eloquent petitioners sometimes phrase their appeals, but we are jealous of all sorts of interference, and we would rather have a very humble station in the control of our own people, under the advisement of trusted and tried doctors, than to run the risk of having a stranger thrust upon us at every upheaval of politics. North Carolina is just as able to give \$6,000 to our quarantine as the General Government is, and she will do it ere long, as we believe.

The Conference of State Boards of Health is inaugurating good work, and deserves the support of the whole country. We wish our friends of the visiting Committee a safe return to their homes, and hope to show them next summer the best quarantine station on the coast.

RELIGIO MEDICI.—The Union League Club resolutions on the death of Dr. Agnew, prepared by Chauncey M. Depew and presented by Sigourney W. Fay, contain the following: "If all Christians were like Dr. Agnew all men would become Christians. With him religion was not a cloak, but a career. It was not a formula, but a faith. It was not alone a liturgy or a creed, but the practice during every working hour of the commandment, 'Thou shalt love thy neighbor as thyself.' The profession was not only enriched by his genius and science, but thousands of young men owe to him the opportunities and examples which will enable them to take up his work and follow in his steps. The loss of such a man in the prime of life and usefulness is a public calamity, only mitigated by his good works while living and his glorious memory after death."—*Boston Medical Journal*,

REVIEWS AND BOOK NOTICES.

THE PHYSICIAN'S LEISURE LIBRARY. George S. Davis, Publisher, Detroit.

We have not noticed this series heretofore, although many of them are of unusual merit, especially may we say this of the series for 1887. The volumes are in handy form, some of them printed in brown, some in black, with broad margins, clear type and leaded lines, just the thing to slip in your pocket for a ride on the train, or for those hours of enforced or voluntary leisure which now and again come to most physicians. They are bound and in paper covers, at 50 and 25 cents, respectively.

The series for 1887 consists of the following: "The Treatment of Hæmorrhoids," by Charles B. Kelsey, M.D.; "Diseases of the Heart," Vol. I., by Dujardin Beaumetz, M.D.; "Diarrhœa and Dysentery, Modern Views of their Pathology and Treatment," by A. B. Palmer, M.D.; "Intestinal Diseases of Children," by A. Jacobi, M.D.; "Modern Treatment of Headaches," by Allan McLane Hamilton, M.D.; "The Modern Treatment of Pleurisy and Pneumonia," by G. M. Garland, M.D.; "The Infectious Diseases," Vol. I. and II., by Karl Liebermeister.

As we have not space to write of all of them, we select two—Dujardin Beaumetz's *Diseases of the Heart*, translated by Dr. E. P. Hurd, of Newburyport, and *Intestinal Diseases*, by A. Jacobi, M.D.

This first volume is translated from the French with the consent and approval of the author, and covers the ground of cardiac therapeutics, bringing the work down to the present date, including cardiac tonics discovered since the date of the edition (1885), contained in foot-notes and otherwise. Of Dr. Hurd's facility as a translator we have spoken before, and many of our readers have known that his renderings are always smooth and his style clear and attractive. The subject of the volume is always important, and because so many great volumes have already been written upon it makes it all the more interesting to know what a master therapist can say about his subject in a small compass. The practical matter given predominates, and many are the hints just suited to the busy doctor who is searching his library table for some suggestion upon the anxious case of the day. Part II.

of this work is on diseases of the Aorta, and the two complete the subject of the Heart and Aorta in a very satisfactory way. The remarks on aneurysm of the aorta have many important points of truth in them, about which we expect to say more particularly at some future time.

Dr. Jacobi's "Intestinal Diseases of Children" treats of physiology, hygiene, pathology and therapeutics of the child digestive apparatus. He discusses dietetics fully as preliminary to a knowledge of gastrointestinal complaints, and succeeds in crowding as much wisdom in his short chapters as we recollect to have seen anywhere on the same subject. We believe that the chapters on food and feeding will be esteemed the highest.

These volumes are issued monthly at \$2.50 a year.

THE LANGUAGE OF MEDICINE: A Manual giving the Origin, Etymology, Pronunciation and Meaning of the Technical Terms found in Medical Literature. By F. R. Campbell, A.M., M.D. D. Appleton & Co., New York, 1888.

This work is intended to aid students of medicine who have no foundation in Latin and Greek, and is a necessity of the day. The author seems to understand thoroughly that most students enter upon the medical course with no adequate training, which is first exhibited in their pronunciation of technical terms. The author selects a list of words most commonly mispronounced, and a perusal of this list will surprise some of our elders who have inherited from the remote times some indefensible pronunciations. For instance, it is extremely uncommon to hear enema pronounced anything but e-nê-ma, or va-ri-o-la anything but vari-o-la. A good drilling in "Scholar's Companion" from twelve to sixteen would save the student the necessity of going back to elements, but as this little book is foreign to so many, we can safely advise all such persons to get a copy of "Campbell's Language of Medicine," whose merits we have scarcely sketched.

A TREATISE ON DISLOCATIONS. By Lewis A. Stinson, B.A., M.D. With 163 Illustrations. Lea Brothers & Co., 1888. Price \$4.00.

This volume is supplemental to the admirable volume by the same author on "Fractures," and it loses none of its interest by coming out five years after the latter volume. The author has spared no pains to give his readers the result of careful research into the voluminous

and conflicting reports of cases, and his discriminating study shows the amount of personal experience which was brought to bear in interpreting correctly the true lessons obtainable.

The arrangement of the volume is good for easy reference, and to give a comprehensive view of the whole range of the subject. Special dislocations occupy, of course, the bulk of the volume. The illustrations are ample, and while we recognize many of the old ones (and they are well nigh indispensable), there are new ones in plenty to enforce the examples of disease described.

We expressed our pleasure upon the perusal of the first part of the author's work on fracture, and now that he has completed his labors, we congratulate him that he has added such substantial contributions to American surgical literature. The volume is produced in the excellent manner which characterizes the books published by this well-known firm.

LESIONS OF THE VAGINA AND PELVIC FLOOR, with Special Reference to Uterine and Vaginal Prolapse. By B. E. Hadra, M.D. Philadelphia: Records, McMullin & Co., 1888. Pp. 329.

This treatise, we are told by the author, appeared in the *Medical Register*, 1887, and in reprinting these articles he has appended such recent additions to the literature of the subject as he deemed necessary for the elucidation of the subject. The subject of the volume is not nearly so rare as it is to read after an author from a Southern State. True, many of the authors of medical volumes are transplanted Southerners—Sims, Thomas, Sayre, Wyeth, and maybe others—but with the exception of the volumes of medicine by Dr. Joseph Jones, of New Orleans, there have been no books given to the world by men from our section.

This is a handy, well-printed book, with illustrations quite as good as the small pages will allow, the surgical treatment of ailments and lesions being predominant. We wish the author success.

ILLUSTRATIONS OF CLINICAL SURGERY: Consisting of Plates, Photographs, Wood-cuts, Diagrams, &c. By Jonathan Hutchinson, F.R.S., LL.D. Philadelphia: P. Blakiston Son & Co.

These are the final fasciculi, including XXII. and XXIII. As many times as this work has come under our notice, we go back to it with renewed admiration, as an example of the choicest leaves

from the practice of a surgeon who is by odds the best clinical teacher on all the multifarious subjects included under the head of Surgery now living. These fasciculi collected make two handsome volumes, the cost of which (upwards of \$120) puts it among the forbidden luxuries as far as most of our readers are concerned.

The plates in these fasciculi represent : Syphilitic Tertiary Ulcer, Resembling Rodent Cancer ; Lupus Lymphaticus ; Psoriasis Cured by Chrysophanic Acid ; Very Large Keloid Patch on the Scar of a Burn ; Multiple Keloid in the Scab of Acne ; Various Diseases of the Tongue ; two plates ; A Peculiar Form of Cancer of the Skin ; Lupus of the Foot.

There is only one Jonathan Hutchinson and one such book in any language.

THE APPLIED ANATOMY OF THE NERVOUS SYSTEM: Being a Study of this Portion of the Human Body from a Stand-point of its General Interest and Practical Utility in Diagnosis, Designed for Use as a Text-Book and a Work of Reference. By Ambrose L. Ranney, A.M., M.D. Second Edition. New York : D. Appleton & Co., 1888.

We took great pleasure in perusing the first edition of this work, and commended it as warmly as we knew how, and now we find that the present new edition far exceeds it, by reason of much additional matter, and a revision of the old. Its typographical excellence makes what is so often a dry subject a really enticing one, and the author's style lends additional charm to the text. The liberal use of the best illustrations, largely from Sappey, elucidate the text and make it an easy volume for consultation.

TRANSACTIONS OF THE MASSACHUSETTS MEDICO-LEGAL SOCIETY,
Vol. I. No. 10, 1887.

This is another contribution to medico-legal literature by this active Society, completing nearly 400 pages. The Society numbers 62 regular members and 23 associate members.

The contents of this number are : "A Case of Poisoning with the Oil of Gaultheria," by J. G. Pinkham, M.D., and "Note on Anomalous Arrangement of the Large Veins of the Neck," by the same writer. The collection of the parts into a volume will be an important addition to the medical library. The work presented is

largely composed of that done by Medical Examiners who take the place of the old system of coroner's inquests.

Our people ought to be set to considering the renovation of our inquest laws, and for those of our readers who have had it under consideration many years we recommend what has been done in Massachusetts.

MORROW'S ATLAS OF VENEREAL AND SKIN DISEASES.

As this great work progresses we are at a loss to give a description of it which will satisfy our readers without an examination. The size of some of the plates is nearly equal to those of the Sydenham Society's Hebra's Plates, and are in the main of as good execution. One or two we recognize as from the choice work of Hutchinson's Illustrations of Clinical Surgery. That there is a demand for such highly finished works is a credit to the American profession. The Atlas will be finished in 15 monthly parts, each containing five folio, chromo-lithographic plates, and from 16 to 20 pages of text, at \$2.00 a part. Address Wm. Wood & Co., 56 & 58 La Fayette Place, New York.

PHOTOGRAPHIC ILLUSTRATIONS OF SKIN DISEASES. By George Henry Fox, A.M., M.D. Hand-colored plates: nearly 100 cases from life.

Our readers know already what we think of Fox's "Skin Diseases." Each plate stands close scrutiny, and, indeed, the beauty of these artotypes cannot be duly appreciated until they are scrutinized. The "Variola" plate under a glass is life-like enough to make one shudder, if there is any of that sort of feeling left in a doctor, and all of them are true to life, with none of that flatness so objectionable in inferior photographs. Subscriptions will be received by E. B. Treat, 771 Broadway, New York, at \$2.00 a part, the work to be complete in 12 parts.

PHYSICIAN'S BEDSIDE RECORD.

We have received a copy of the Physician's Bedside Record for the Systematic Recording of Clinical Notes and their Permanent Filing for Future Reference. Each little book is designed for the record of one case, the physician writes his directions for the treatment of patient at the bottom of the page each day. The nurse is

to record each and every event connected with the patient at the time of its occurrence. We would like to see these "Records" adopted, as they cost only 50 cents a dozen. Address the Plimpton Manufacturing Company, Hartford, Connecticut.

THE ESSENTIALS OF MEDICAL CHEMISTRY AND URINALYSIS. By Samuel E. Woody, A.M., M.D. Second Edition. Eighty-five Illustrations. Louisville: John P. Morton & Co., 1888. Price \$1.25.

This is a very condensed little manual for the use of medical students, giving such a course as is usual in many medical colleges. It is clearly written and fully illustrated, and will doubtless be sought after as a "quiz" manual.

CYANIDE OF ZINC is said to produce valuable results in cardiac cases, more particularly in cardiac neuroses, in which it is stated to act quickly and certainly. Pain in the region of the heart, palpitation and want of rhythm are quickly relieved, and in some cases cured. It is given in doses of one-tenth to one-eighth of a grain three times a day.—*Medical Record*.

DE LAGNEL HAIGH, Ph.C., recently appointed as Assistant Professor of Chemistry in the St. Louis College of Pharmacy, was a student in the New York College, and afterward went to the University of Michigan, where he graduated. He is a young man of marked ability.—*Pharmaceutical Record*, June 15th. [Mr. Haigh is the son of our esteemed ex-President (of the Medical Society of North Carolina), Dr. T. D. Haigh, of Fayetteville, and we wish for him continued prosperity.]

DRESSING FOR BROKEN FINGER.—At a recent meeting of the Philadelphia County Medical Society, Dr. A. C. W. Beecher reported a case of simple fracture of the distal phalanx of the index-finger, which he treated by applying a narrow bandage from the end of the finger to the second phalangeal joint, making two layers. This he coated thickly with collodion, which, drying and hardening quickly, made a neat, smooth and stiff water-proof casing, which was worn, with but one change, until the fracture was cured.—*Med. Reporter*.

NOTES.

DR. JULIAN J. CHISHOLM has recently successfully transplanted a rabbit's cornea into the human eye, the third successful case on record.

ALL REJECTED.—All the candidates appearing before the British Columbia Examining Board were rejected this year. It should be said that the *all* included *two* candidates only.—*The Journal*.

IMPORTANT TO MEMBERS OF THE SOCIETY.—The report of the Committee on Nominations has failed to reach the Committee on Publication, and there is no way to complete the record but from memory of the Committee on Nominations, or of the officers of the Society. We wish that each member of the Society chosen to places, either as officers or delegates, would send us their name and address to enable us to amend the record.

PREPARATORY SCHOOL FOR MEDICAL STUDENTS.—The summer term of Davidson College, North Carolina, begins June 28, 1888, and will continue three months. The course of instruction consists of six lectures weekly on each of the subjects of Anatomy and Physiology, and three weekly on Chemistry and Materia Medica. This is equal in the amount of instruction given to the regular winter lectures of most medical colleges, and forms an admirable preparation for beginners. The students of my winter session (12 mo.) will, at the beginning of the summer term, take up general Pathology and Microscopy. By taking the regular summer and the advanced course also, students who have taken one course at a medical college will get a profitable review of their elementary studies, and also get what is the only true preparation for the study of Practice and Surgery, a course of general Pathology. The use of the Microscope in the Laboratory is taught to all advanced students. Anatomical outfit complete and laboratory well equipped with instruments and reagents. Tuition for Summer Term, \$30; with both preparatory and advanced course, \$50. Board, with room-rent, \$12 to \$14. Physicians will confer a favor by calling the attention of young men to this school, or by sending me names. For circular and particulars address Paul P. Barringer, M.D., principal, Davidson College, N. C.

"FAITH CURE"—"CHRISTIAN SCIENCE."—Can anyone explain why the above "systems" have never taken in the South? Our people have a sort of reputation for illiteracy, but the "metaphysical" "systems" they don't like. Now, why?

GASTROTOMY FOR THE REMOVAL OF A FORK.—Dr. Max. E. Witte, of Mt. Pleasant, Iowa, reports (*The Journal*) a gastrotomy for the removal of a silver fork. The temperature did not exceed 100° F., nor her pulse over 86. Recovery.

DR. FRANK P. FOSTER, editor of the *New York Medical Journal*, who has been afflicted with perityphlitis, is recovering. We congratulate him and the admirable journal over which he presides upon the reception of this good news, and trust that his recovery may be complete.

We call attention of our readers to the advertisement of Mr. Isaac Phillips, whom many of our readers will remember visited the Medical Society at Durham. He deals in all the varieties of instruments and surgical appliances, with headquarters at Atlanta, Ga. Address him a note of your wants and see what he will do for you.

CAUSATION AND PREVENTION OF PNEUMONIA.—A pamphlet on the Causation of Pneumonia, by Dr. Henry B. Baker, is being distributed by the Michigan State Board of Health. It is an 85-page pamphlet, and is a compilation of statistics, collected by the State Board of Health, relating to pneumonia in Michigan and in other parts of the world. It is a thorough consideration of the subject, and seems to prove that pneumonia is controlled by temperature and humidity of the air. The pneumonia increases after the atmosphere is cold and dry, and decreases after the air is warm and moist. One would suppose that such climatic causes could not be controlled, but Dr. Baker points out how he thinks the disease may be greatly lessened by controlling the temperature, and especially by moistening all air which requires to be warmed, in all buildings, public and private. during the time of greatest danger from the disease (cold weather) most people spend half their time in buildings where such conditions can be controlled, and Dr. Baker claims that it is the long-continued exposure that causes this disease; so that, if the in-door conditions are properly cared for, this disease will be greatly lessened.

YOU have no right to give the name or initials of a patient in describing his case in public print. A case has recently been decided in France in which a physician was fined 500 francs for violating his privileges.

DR. S. W. GROSS, in a letter to Dr. W. J. H. Bellamy, Secretary of the Board of Medical Examiners, informs him that Jefferson Medical College has adopted a three year's compulsory course. See also an advertisement to the same effect.

TUMOR OF THE SPINAL CORD.—The patient upon whom Dr. Gowers and Mr. Victor Horsley (see Dr. Barringer's Report in this issue) operated for the removal of a large tumor of the spinal cord from within the bony canal appeared in person before the Royal Medical and Chirurgical Society. The successful surgeons reported all the details at the June meeting of the above Society. Well may the world look on and admire this consummation of *diagnosis and surgical skill*.

PARAPHENACETIN.—The aromatic series of carbon compounds seems destined to supply us with a very large number of drugs useful in treatment. We are already familiar with antipyrin (dimethyloxy-chinicin) and antifebrin (acetanilid). The latest discovery is that of phenacetin, or paracetphenetidin, a body closely allied to antifebrin. This body was first prepared by Dr. O. Hinsberg, of Elberfeld, who, in conjunction with Prof. Kast, subjected it to physiological research. Here are some of the results: Phenacetin is inodorous, tasteless, very slightly soluble in acid chyle or pancreatic extract at body temperature. It has no effect in reducing normal temperature, but it is claimed that in all cases of pyrexia even small doses (4 to 7 grains) never fail to produce a perceptible effect in diminishing fever. No ill-effects, such as nausea, vomiting and collapse, which sometimes follow the use of other antipyretics, have been observed. Altogether fifty cases have been treated with the new febrifuge. Of these, tuberculosis, pneumonia, morbilli and enterica form more than half. The reduction of temperature takes place slowly, the maximum effect being produced in from about four to six hours, and in eight or ten hours the effect disappears. The main deductions about this new chemical are: (1) It is an antipyretic. (2) It usually causes no vomiting. (3) A single large dose is more serviceable than many small ones. (4) Fall of temperature is slower but more permanent than in other similar drugs, on account of its difficult solubility.

ABATEMENT OF NUISANCES.—The activity of some of the County Boards of Health in serving notices for "Abatement of Nuisances" would indicate that they are doing good work.

MR. ROBERT D. JEWETT, of Wilmington, former Clerk of the North Carolina Board of Health, we are pleased to note, is among the graduates in medicine at the University of Virginia.

INTESTINAL INSUFFLATION OF HYDROGEN GAS.—We notice in the *Medical News* of May 26 a report by Dr. N. Senn of the insufflation of hydrogen gas into the rectum for the purpose of determining the presence of perforation in the intestinal canal in cases of penetrating wound of the abdomen. His experience is founded upon numerous experiments, many of which were practiced on the human subject. The fifty-first experiment was practised upon himself. Under pressure of one half pound nearly one and a half gallons of hydrogen were inflated per rectum. The distention of the colon caused simply a feeling of distention along its course; but as soon as the gas escaped into the ileum colicky pains were experienced, which increased as insufflation advanced, and only ceased in one hour and a half after all the gas had escaped. When the intestines and stomach had become fully distended the feeling of distention was distressing, and was attended by a sensation of faintness which caused profuse clammy perspiration. Dr. Senn cautions that the distention must be done *very* slowly; that the hydrogen so used is innocuous. His conclusions are: (1) The entire alimentary canal is permeable by rectal insufflation. (2) Inflation from above downward does not succeed. (3) The ileo-cæcal valve is rendered incompetent by the pressure of from one-third to two pounds. (4) It must be done *very* slowly. (5) A rubber balloon containing three or four gallons is the best insufflator. (6) Hydrogen is innocuous and unirritating. (7) The use of hydrogen enables the surgeon to determine in advance of a laparotomy whether or not the bowel is perforated, and so meet medico-legal responsibilities. In the *Medical News* (June 9) Dr. William Mackie, of Milwaukee, reports a case of pistol-shot wound of abdomen in which the diagnosis of perforation was attempted to be determined. The escape of insufflated hydrogen gas from the wound afforded positive evidence of perforation existing somewhere in the gastro-intestinal canal, and on this evidence alone he performed a laparotomy. Dr. Mackie failed to get the test of a flame from the escaping hydrogen as he used only a

match, and never happened to be directly the wound of entrance when the gas was escaping. In the same number of the *Medical News* Dr. Wm. J. Taylor, of Philadelphia, relates a case exemplifying the use of insufflated hydrogen to determine the site of a fecal fistula. The gas was sent into the bowel from a rubber bag by means of a Davidson's syringe and the application of a candle to the outlet set fire to the escaping gas, which burnt with a snapping noise peculiar to burning hydrogen. The hydrogen test in this case was used to determine whether the proximal opening was in the large or small intestine. We look for numerous experiments now in this direction, as hydrogen gas can be easily made wherever zinc and sulphuric acid can be had, and in any town where a dentist's establishment affords a gas-bag all the outfit is at hand. As a matter of course, somebody's ingenuity will devise a simpler method, maybe a color or odor test. The suggestion is full of practical interest. Dr. John Vansant, of St. Louis, reminds surgeons that hydrogen gas, while innocuous, when mixed with some other gases is explosive, and that the test of applying a match to escaping gas might be dangerous in certain circumstances.

THE INFLUENCE OF MUSTARD AND PEPPER ON DIGESTION AND METABOLISM.—Dr. P. Burjinsky gives the following as the results of an experimental inquiry into the effects of mustard and pepper : 1. When given with meals in small quantities, in the daily amount varying from 8 to 18 grammes of the condiment prepared of 50 grammes of the mustard-flour and 80 grammes of warm water—that is, when taken exactly as in daily life—mustard does not show any influence on the assimilation of nitrogen of mixed diet (consisting of butcher's meat, milk, white and rye bread, potatoes and beef-tea and tea). 2. Pepper, in the daily quantity from 0.7 to 1.0 gramme, lowers the assimilation, the decrease varying from 0.4 to 2.3 per cent. 3. Mustard, in the daily amount of 4 to 10 grammes, lowers the assimilation of fats, the fall amounting to 2.2 per cent. 4. Neither mustard nor pepper shows any influence on the systemic metabolism. 5. Mustard somewhat improves appetite, while pepper diminishes it. 6. Mustard has no influence on the daily quantity of urine, though Dr. Lauder Brunton, in his classical "Text-book of Pharmacology," 1885, p. 379, regards the condiment as a diuretic. 7. But pepper, as a rule, increases the secretion of urine, the daily surplus varying from 3 to 14.8 per cent. The urine at the same

time acquires a strongly pronounced characteristic odor. Probably both the diuresis and odor should be attributed to the presence of an essential oil isomeric with turpentine (Flückiger). 8. Both mustard and pepper very frequently give rise to gastro-intestinal disturbances—colics, diarrhœa, with eight to ten stools a day—in persons unaccustomed to the use of the condiments in question.—*Medical Record.*

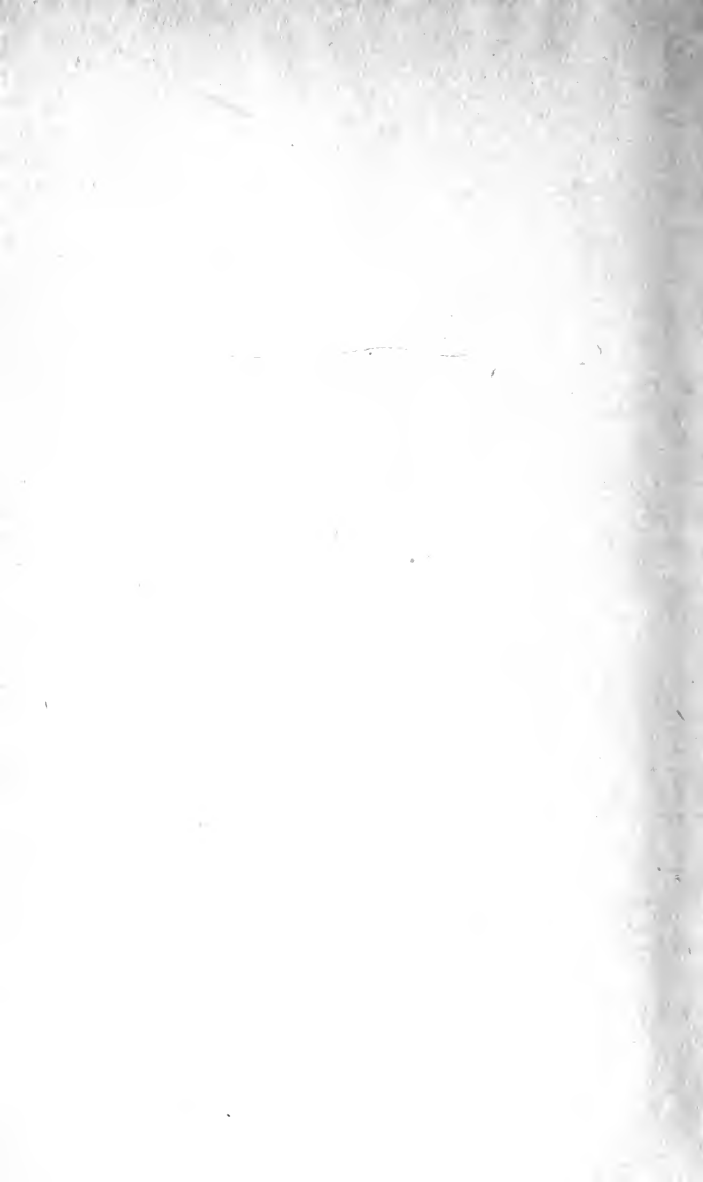
READING NOTICES.

I HAVE USED ELIXIR PURGANS for a number of years, and consider it the best liquid cathartic that I have ever used.

A. H. BRUNDAGE, Xenia, Ohio.

J. F. LOGAN, M.D., Clarksville, Ia., writes: "It is a pleasure to say I have been using your Lactated Food in my practice in cases of diarrhœa of adults and children, and it has far more than met my expectations and is fully up to your recommendation of it."

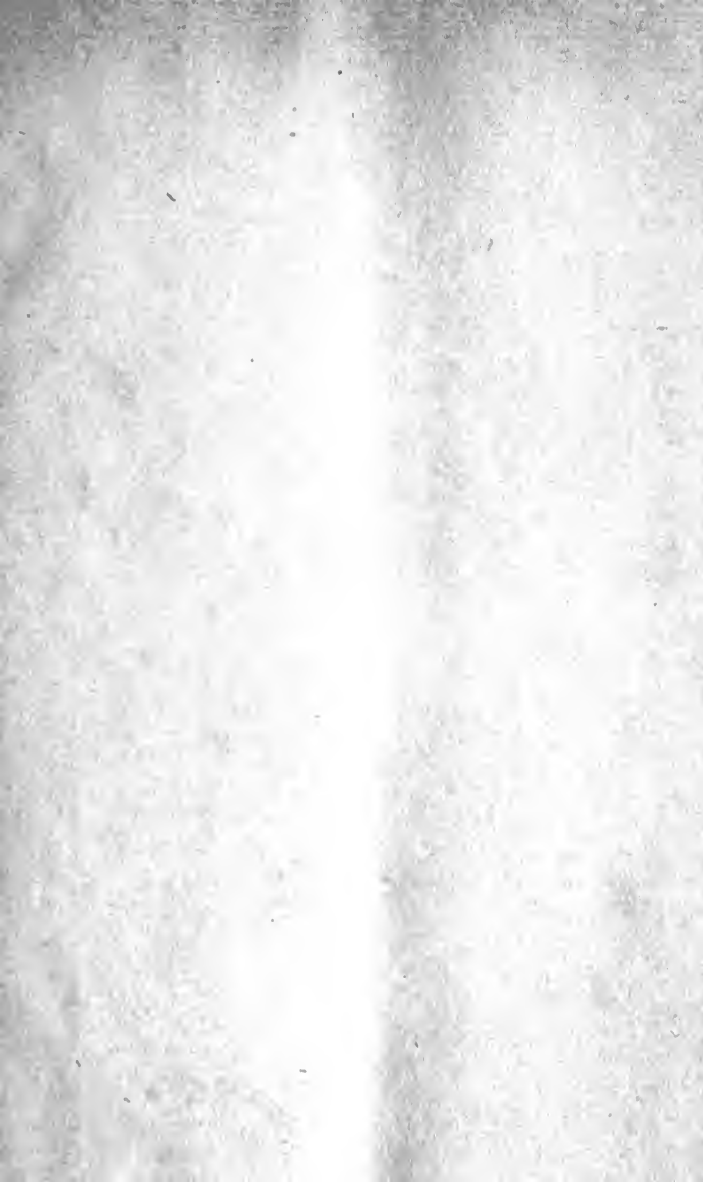
WM. R. WARNER & Co. have issued the following notice to physicians: "We take this method of denouncing the circulation of certain erroneous reports as being the outcome of ignorance or malice. We have no connection with the firm of H. H. Warner & Co., of Rochester, who make "Safe Remedies" and other patent medicines. Our advertising is to the medical profession and our pills and products (Warner & Co's) have been used and held in high esteem by the most eminent doctors during the past thirty years in the United States and in foreign countries. The therapeutic value of a remedy is ascertained by the medical practitioner, and it is the province of the manufacturing chemist to prepare the various medicinal preparations in the most correct, compatible, palatable and convenient manner, by the aid of skill acquired by years of practice and experience. It seems to be necessary to specify William R. Warner & Co's Pills and Bromo Soda with Caffeine to obtain what you want."

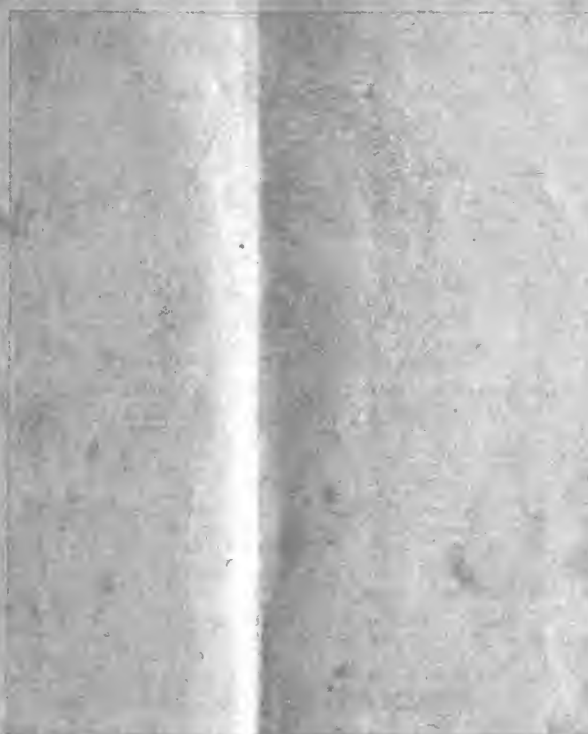












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J. Miller Fothergill

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THOMAS F. WOOD, M. D.,
GEO. GILLET THOMAS, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

CEREBRO-SPINAL MENINGITIS.

By F. T. MERIWETHER, M.D., Asheville, N. C.

(Read before the Buncombe County Medical Society, February
6, 1888.)

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Cerebro-spinal meningitis historically belongs to the nineteenth century, though there is no doubt but that it existed prior to that period. It was not until the first part of this century that it was differentiated as a distinct disease, and even then it was thought by some to be strictly local and allied to influenza; but there is certainly no resemblance between the two, except that they both prevail in epidemics. Even Niemeyer says that it presents no symptoms except such as are referable to the local affection. Croupous pneumonia was once recognized as a local disease, but now we all recognize it as a constitutional disease with prominent local symptoms. So it is with cerebro-spinal meningitis. It is a constitutional

disease, distinct from all other diseases, and is due to a specific. Its history any one may obtain from the cyclopædias of medicine, and is well worth studying. It may occur in sporadic cases; it may be epidemic, or it may be endemic. It prevails endemically in New York, Philadelphia, and in all our larger cities, having caused more or less deaths every year since its introduction. In New York the minimum number of deaths from it, in any year from 1871 to 1882, was 97 in 1878, the maximum being 782 in 1872. In Philadelphia, where it has prevailed since 1863, the death-rate varied from 36, the minimum in 1869, to 384, the maximum in 1864.

It is in no sense of the word contagious, though some marked examples showing its apparent contagiousness may be found. Ziemssen quotes a case related by Hirsch, in which a young man sickened of cerebro-spinal meningitis on February 8th. His nurse returned to her home, some distance away, and there died of the disease February 26th. Of the mourners from a neighboring township three died of the same disease—one within twenty-four hours, another on March 4th, and the third on March 7th. J. Lewis Smith relates a case in which a boy died from cerebro-spinal meningitis on Sunday. On Monday his mother washed the linen and bed-clothes of the boy. On Wednesday she was taken sick and died, her infant child following her soon after. We have seen some cases here during the prevalence of the disease in which contagion seemed marked, one of which I now call to mind. A young girl, aged ten years, was taken sick suddenly on Thursday night with well-marked symptoms of cerebro spinal meningitis. The rest of the family were well, none suffering from any prodromic symptoms, which, by the way, the girl had felt for two days. On Saturday morning her brother, seven years of age, was taken sick, growing rapidly worse, both dying during the following week. Fifteen days afterward a second girl, aged twelve years, was taken sick but recovered.

Many other such cases could be cited, but in all of them we can cover the ground by calling them infectious, as the different patients were exposed to the same cause or causes.

Loomis* classed this disease among the miasmatic-contagious diseases, Flint† among the infectious. Smith‡ says that, while we may admit some slight contagion, still the proof is that it cannot be

*Loomis' Practical Medicine.

†Flint's Practice of Medicine.

‡Diseases of Children.

called a contagious disease. Stillé* says that it is in no sense of the word contagious; Bortholow† says that the proof is that it is not a contagious disease; Hartshorne‡ classes it among the zymotic diseases; Richardson§ says it is very probably not contagious. The writer on this subject in the *Encyclopædia Britannica* says: "The question of contagiousness remains unsettled, but the weight of authority appeared to be in favor of the theory of communicability. It cannot be regarded as contagious in the same degree as other specific fevers, such as typhus, small-pox and scarlet fever." It is an infectious disease, belonging to the class miasmatic-contagions, being due to a virus originating in a living being and being developed externally, probably in decomposing organic matter.

It has been called by a variety of names, as spotted, petechial, congestive, malignant and purpuric fever, cerebro-spinal typhus, syncopal typhus, malignant and typhoid meningitis, epidemic meningitis, tetanoid fever and black plague.

Etiology—Prevailing as it does in epidemics, this disease must have a specific cause, virus or germ. No bacterium has been discovered, as yet, which sustains a causative relation to the disease, although some years ago Leyden|| and Gandier¶ discovered specific micrococci in great abundance in the blood and urine of patients with this disease, but proof is wanting that they hold a causative relation. Of late, in the study of causal relations between bacteria and certain infectious diseases, the etiology of cerebro-spinal meningitis naturally presented itself. There seems to have been quite a large number of observations made upon this disease, but we find but few limited to the bacteria present in idiopathic cerebro-spinal meningitis. Fränkel, Foa, Bordani Ufreduzzi and Weichselbaum have all succeeded in obtaining pure cultures of Fränkel's pneumococcus in a series of cases of cerebro-spinal meningitis. Weichselbaum, Goldschmidt* and Dr. Biggs, of New York, have succeeded in isolating a new form of bacterium, which Goldschmidt has named "*diplococcus intracellulosus meningitidis*," it having a peculiar and characteristic arrangement in pus cells. Cultures have been made and injections from them have given typical cerebro-

*Pepper's System of Medicine. †Bortholow's Practice of Medicine. ‡Hartshorne's Essentials. §Richardson's Preventive Medicine. ||New York Medical Record, September 9th, 1882. ¶Rev. Medicaire, June 3d, 1882. *New York Medical Journal, March 17th, 1888.

spinal meningitis. This diplococcus may be stained with any of the basic aniline dyes, but is decolorized by Gram's or Weigert's methods. While it is highly probable that there is a near relation between this diplococcus and the etiology of cerebro-spinal meningitis, still we cannot take it as a truth, for injections into the substance or intracerebral substance of any of the pyogenic germs will produce a meningitis. There is plenty of room for more study and investigation into the causation of this disease. - It is not likely that the cause or bacterium emanates from the soil, directly at least, for a great many epidemics commence when the ground is frozen hard, and they occur in localities with the most diverse geological formations, simultaneously. Medin* thinks that "the infectious material is absorbed by the lymph spaces of the nasal mucous-membrane, which, according to Key and Retzius, communicate, on the one side, with the atmosphere through openings between the epithelial cells, and on the other side with the sub-arachnoid spaces at the base of the brain." This is unproven, but worthy of consideration. The fact that vitiated air is one of the predominant predisposing causes, renders it very probable that the cause or germ is an atmospheric one. Among the predisposing causes we may mention the winter season, epidemics occurring much oftener during the winter than during the summer months. Of 182 epidemics analyzed by Dr. John Simon, 94 or nearly 54 per cent. occurred in December, January, February and March. It is quite likely, however, that the predominance of epidemics during the winter months is due, not to a direct predisposing cause, but to the greater crowding, less ventilation and less cleanliness always to be observed during the cold months. It is proven conclusively that anti-hygienic surroundings, bad sanitation, over-crowding, defective ventilation, sewer emanations, etc., have a direct and potential causative influence on this disease, particularly as to its malignancy, probably in the same way as they do in Asiatic cholera and other grave epidemic diseases; that is, by furnishing a nidus for the growth of the germ or cause of the disease. During the epidemic here in Asheville, lasting from the middle of January to the 1st of April, of 99 cases, 67 or about 68 per cent., originated in houses with notably bad sanitary surroundings; only 10 cases, or 11 per cent, being in houses in which no unsanitary condition existed.

*Smith's Diseases of Children.

Excessive brain-work, bodily fatigue, mental excitement and anxiety; exposure to excessive heat, cold or dampness are also predisposing causes. Troops on the march, soldiers in barracks and the poor in tenement houses are especially liable to its attack. It attacks persons of all ages, but is especially liable to attack the young. J. L. Smith says that three-fourths of all his cases occur in children under 10 years of age. Loomis thinks that the age of greatest liability is between 10 and 18 years, while Flint puts it as between 20 and 30 years. There is no doubt but that the age of greatest liability is between 5 and 15 years.

In the epidemic here, of 99 cases, 74 cases, or about 78 per cent., occurred in children under 15 years of age, the youngest being an infant 10 months old, and still nursing at the breast, while the oldest patient was 38 years of age. According to the report of the New York Board of Health, in 1872, out of 975 cases of cerebro-spinal meningitis, 771 occurred in children under 15 years of age.* The infant and the aged are notably free from its attacks, although we occasionally have cases occurring in both.

The proportion of males and females is about equal in private practice, but in the statistics of hospitals and camps we find a greater number of males, due to the greater exposure and hardships to which men of this class are subject. Of the 99 cases, analyzed by myself, and occurring here, 49 were males, 50 being females. In some cases we can apparently discover an exciting cause. If an individual, whose system is affected by the epidemic influence, leads a quiet life, he may escape; but if there be an unusual excitement of the mind, or if the functions of the system be disturbed an outbreak may occur. Among these causes we find over-work, lack of sleep, fatigue, over-eating or prolonged abstinence from food during an epidemic.

Prognosis—Ames gives the mortality rate in an epidemic which occurred in Alabama in 1848 as 60 per cent. Tourdes, in an epidemic seen by him, gives the same rate. Dr. S. B. Hunt gives the percentage as 70. Stillé states that in ten epidemics, occurring between 1838 and 1848, the mortality rate was 70 per cent., while the same number of epidemics between 1855 and 1865 gives only 36 per cent. Loomis gives the mortality in severe epidemics as 80 per cent., and about 30 per cent. in mild ones. Smith, in his private practice,

*American Journal of the Medical Sciences, October, 1873.

places his mortality at 50 per cent. In the epidemic here, of the 99 cases, 52 or $52\frac{1}{2}$ per cent. recovered, making the mortality rate $47\frac{1}{2}$ per cent. The death-rate diminishes in this, as in all other epidemics, as we approach the close of it.

A large proportion of the fatal cases die during the first five days, the average duration of those who died during the epidemic here being three and three-fourth days. Patients who live until the end of the second week without serious complications will probably recover only two of the 47 deaths occurring here, happening after the sixth day. After this period the danger is from exhaustion and impaired nutrition.

The minimum duration recorded is five hours, the maximum one hundred days (Tourdes). During its prevalence here I noted one case lasting only three hours from the initial chill until death, and another of four hours duration. The maximum here was one hundred and thirteen days, the girl being convalescing when she passed from under my notice.

Statistics show that under 15 years of age the mortality rate is greater than between 15 and 35 years, while over 35 years each year diminishes the chances of recovery. An irregular or intermittent pulse, an abundant eruption, great nervous excitement, high temperature, absolute insensibility of the pupils, profound stupor, shallow and irregular respiration, continued vomiting and paralysis of the muscles of deglutition all bespeak an unfavorable prognosis.

The most frequent complications are those which pertain to the lungs: bronchitis, œdema, pneumonia, pleurisy and atelectasis. Endo-carditis, pericarditis, parenchymatous degeneration of the liver and kidneys, lesions of the eye, ear and joints are all serious complications.

The sequelæ of cerebro-spinal meningitis are numerous: headache and dizziness are liable to occur for years even in the most favorable cases. Deafness and blindness often occur, the deafness being usually bilateral, while the blindness is oftener unilateral. The blindness is due to a purulent choroiditis, while the deafness is due to a purulent inflammation of the labyrinth of the ear.* Deaf-mutism is sometimes observed. Single nerves are sometimes paralyzed, and paralysis of muscles or groups of muscles is quite com-

*Knapp, New York Medical Record, August 15th, 1872.

mon. The psychical disturbances vary from diminution in intellect to complete idiocy.

Death may result from heart-failure; from the pulmonary complications; from paralysis of the muscles of deglutition and of the thoracic group; from asthenia; from the direct interference with the respiratory centers; from inflammation, or from the pressure of the effusion, or from the intensity of the poison in the beginning of the disease, overwhelming the system.

Pathological Anatomy—Pathologically, as well as etiologically, we have two forms of cerebro-spinal meningitis—one which occurs as a sporadic disease, in which the local symptoms predominate over the constitutional, and where we have a simple acute inflammation involving the meninges of the brain, medulla and spinal cord; and the other, epidemic cerebro-spinal meningitis in which we find, in addition to the lesions of the sporadic form, visceral and sanguineous changes which we find in all grave acute infectious diseases. The number of white blood corpuscles increase, while the red ones are shrivelled and partly disorganized. Smith states that the fibrin of the blood is increased, while Loomis thinks it is diminished. The skin often presents petechiæ and herpetic spots, while large, irregular, discolored patches are occasionally seen. It was from these large spots that the name spotted fever was derived, as these spots, though rather rare now, were almost always present in the epidemics of the first of this century. Of the 99 cases occurring here, in only 8 were these purpuric spots seen, the herpetic eruption being present in nearly all the cases. Small red points in patches were observed in a few cases. The herpes is common, sometimes occurring as early as the third day, in other cases not showing itself until the second week. The most common seat is the lips and ears, though it sometimes appears upon the scalp and cheeks. In one case that I saw almost the entire face was covered with the vesicles. The serous membranes are frequently covered with petechial spots and small extravasations. The heart and the voluntary muscles often undergo the same granular and waxy degeneration which we find in typhoid fever, and, indeed, in all grave acute infectious diseases. The liver is congested, the liver cells being often cloudy and granular, there being a fatty or albuminoid degeneration. The spleen is enlarged and softened in a large proportion of the cases. The lymphatics are usually hyperæmic. The intestinal mucous

membrane is hyperæmic and the follicles congested. The agminated glands and Peyer's patches are usually enlarged and are sometimes ulcerated.

Nephritic lesions are often observed in the kidneys, the microscopical changes being those of the first stage of acute Bright's disease. Arthritic inflammation, apparently of a rheumatic character, is sometimes present, being usually quite slight, producing a slight œdema around one or more joints. Abscesses into the joints have been observed.

The lungs are often the seat of hypostatic congestion, œdema, bronchitis, atelectasis, lobular and sometimes lobar pneumonia. Webber has described a variety of cerebro-spinal meningitis which he calls pneumonic. In these cases the cerebro-spinal axis is but slightly involved, while the pneumonic symptoms are marked. It is not improbable that these are cases in which the pneumonia is present as a complication, and the cerebro-spinal irritation being rather slight, is masked by the greater trouble.

Choroiditis, iritis and suppurative inflammation of the middle and internal ear are sometimes present. On examining the brain we find the convexity and base most involved. The dura mater is tense and shining, and usually has a large number of punctate spots of extravasation. The pia mater of the brain and cord is thickened more or less, its surface roughened and its vessels more or less intensely congested. In some cases all we discover is an extreme hyperæmia of the meninges.

When there is an exudation, it usually takes place into the meshes of the pia mater, and underneath that over the surface of the brain. The exudation is composed of serum, fibrin, pus-cells and red blood corpuscles, these varying in proportion as the effusion is serous, fibrinous, purulent or sanguineous. At first the effusion is rather clear, then it becomes milky and clouded, then yellowish and then thick and greenish yellow. In the fulminating cases these changes occur very rapidly. Dr. Gordon* relates a case of five hour's duration, in which a greenish purulent exudation had occurred. The largest collection of pus in the cord is about the dorsal and lumbar vertebrae, in the brain about the pons and medulla. The posterior portion of the cord is usually the part most involved, the anterior

*Dublin Quarterly Journal, 1866.

portion suffering only in the very severe cases. In some few cases the entire cord is bathed in a purulent exudation. The brain substance is usually hyperæmic, there often being small spots of ecchymoses. There is sometimes softening, occurring especially near the large patches of exudation.

On section there is more or less congestion and extravasation in the brain substance, the ventricles often being full of serum and sometimes of pus. The gray substance of the cord is of a pinkish color and may be infiltrated with serum. The cranial sinuses are found full of blood and usually contain soft dark clots. After absorption occurs the pia mater, both of the brain and cord, often remains thickened.

Symptoms.—It has been attempted to divide cerebro-spinal meningitis into types and stages, but this is very difficult, as every case differs in its progress, you seldom finding two cases with the stages progressing in the same order. There is no doubt but that there may be an abortive or mild type of this disease, or else how can we explain those cases that have every appearance and symptom of cerebro-spinal meningitis, occurring during an epidemic, only lacking the severity and fatality, running a course of a week or two, *always* ending in recovery, and those cases in which the patient is taken suddenly with a chill, followed by a comatose condition, delirium lasting an hour or so, slight opisthotonos and muscular rigidity, vomiting or sick stomach lasting for eight or ten hours, and in twenty-four hours from the initial chill the symptoms have all subsided, saving a headache and a somewhat-sick stomach. No doubt most of us have seen such cases during the past month, which were very puzzling, the diagnosis being made solely by exclusion. The invasion of the disease is very abrupt, particularly in the epidemic form, while in the sporadic cases the prodromic period may be from a few hours to a few days. It is this abruptness of invasion which marks the differential diagnosis between this and the other forms of meningitis. In those cases in which we do have premonitory symptoms they come on in about this order: cephalalgia, chills or chilliness, nausea and vomiting, pain in the spine and limbs, vertigo or dizziness. In other cases, where the invasion is abrupt, the patient being in apparent good health, is seized with a chill, becomes comatose, or perhaps has a convulsion, and very often dies in a few hours. This is the meningitis fulminant or

foudroyant. It is in these cases that purpuric maculæ are usually marked.

The pain in the head in most cases is persistent and prominent, and is so intense that, even in a comatose condition, the patient will groan and cry aloud. It may be frontal, occipital, or it may be present only at the vertex. Delirium is present, though the usual state of the mind is one of apathy or indifference. The delirium may be either active or passive. Loquacity and erotic desires, associated with priapism and seminal emissions, sometimes occurs.

Hyperæsthesia of the surface is common, and when present is usually excessive, rendering the slightest contact a source of great suffering. Separating the eyelids or moving the limbs is resisted and causes the patient to cry out.

Anæsthesia usually follows the hyperæsthesia, though it may be present throughout the disease. There is no disease with which cerebro-spinal meningitis may be confounded in which this hyperæsthesia is so marked.

The pain in the back and upper part of the spine is characteristic of the disease, all attempts to flex the head upon the chest increasing the pain, and pressure upon the back of the neck, under the ligamentum nuchæ, causes great agony. Some contractions of muscles or groups or muscles usually occurs, this being most marked in the muscles of the back and neck, causing retraction of the head, and, in severe cases, opisthotonos. Trismus sometimes occurs. Paralysis is not common, although it is sometimes observed. It may be limited to one or more limbs or to a single muscle or group of muscles. I observed one case here of general paresis, lasting, after convalescence from the meningitis, about seven weeks, the patient recovering perfectly. Contraction of the entire muscular system may be present, the arm becoming flexed on the chest, the fore-arm on the arm, the thumb on the palm, the thigh on the abdomen, and the leg on the thigh. When this is marked the case is hopeless. General convulsions are frequent, being usually present, in a more or less degree, in children, while adults are not altogether free from them. Choreic movements are sometimes present, subsultus tendinum and arphologia occurring, when the disease is protracted. Insomnia is common.

The eruption is usually herpetic in character and is limited, as a rule, to the face and neck. Sometimes the eruption is mottled like that of typhus.

Purpuric maculæ, erythema and urticaria are sometimes present, though the herpetic is the most likely to be seen. Numerous red points, scattered over a large surface, or blue lines, are sometimes seen.

The skin is usually dry and cool during the first stage, but afterwards it becomes moist and hot.

The joints are often tender and more or less inflamed, suppurative arthritis having been known to occur.

There is an increase in the urates and phosphates of the urine, albuminuria sometimes occurring. The amount of urine is usually in excess of that of in health, though in some cases there is a lessened amount. There is sometimes retention of the urine and fæces, or else the sphincters may be relaxed, causing incontinence. The bowels are usually constipated, exceptions to this rule being present sometimes in children.

Vomiting is almost always present, occurring with little or no effort, and without previous nausea. It is a distinctive cerebral vomiting, being projective in character, and does not differ materially from the vomiting in other forms of meningitis.

The appetite is usually impaired or entirely lost. The tongue is usually moistened and but slightly furred, though sometimes sordes occur. In a few cases there is an inability to swallow, caused by a lesion of that part of the medulla which controls deglutition, or else of the intra-cranial portions of the nerves which supply the muscles concerned in this act.

The pulse is usually accelerated, beating from 90 to 100 times a minute, though within twenty-four hours after the attack it may run up to 150 or 160. The more dangerous and severe the attack, the more rapid the pulse-rate, except when there is great effusion, causing compression.

In these cases the pulse is usually sub-normal, being as low as 40 per minute. It bears no relation to the temperature, varying 40 or 50 beats within a few hours. In children the pulse is more excitable and accelerated than it is in adults. In many cases it is small and wiry, sometimes dicrotic, and as death approaches it becomes more and more feeble, rapid and compressible. It may become intermittent early in the disease, but this becomes more marked usually later on, though it is not always present.

The temperature, as a rule, is low, and some of the older writers stated that it was never increased at all. North, Foot and Gallop,

who wrote in the early part of this century, all concur in the statement that "it is rare to find an elevated temperature in cerebro-spinal meningitis." Lidell, in 1873, said that "febrile symptoms do not belong to cerebro-spinal meningitis as a substantive disease. But there must necessarily be some rise in temperature, for we always have a more or less active congestion and inflammation of the brain and cord, which would produce more or less febrile movement. In some cases the thermometer will not show an increase in temperature in the axilla, or even in the mouth, but if placed in the vagina or rectum we will get an elevation in every case. Where there is great effusion the temperature is sometimes sub-normal, but the thermometer will very seldom show over 103° F., even in the worst cases, except just before death—102° F. was the average temperature observed here, 107½° F. being noted twice, and the minimum, 97½° F. being noted several times. An almost sure indication of the approach of death is the rapid rise from a low to a high temperature. The external temperature is very variable, much more so than the internal, rising above and falling below the normal several times during the same day. In children the febrile movements are less marked than in adults.

The respiratory tract is, as a rule, involved, the respiration being accelerated out of proportion to the frequency of the pulse, but when a large exudate occurs and presses upon the medulla and respiratory centres, dyspnoea and slowed respiration occurs. In some cases the Cheyne-Stokes respiration is noted, and in almost all cases it is present just before death. The respiration is often sighing, irregular and intermittent.

Taste and smell are usually perverted, and in some cases entirely lost. This is usually only temporary, though in a few cases it is never recovered. Strabismus is common, and may occur at any period of the disease. It may appear and disappear several times during the course of the disease, disappearing altogether as convalescence is established, or it may be permanent. It may be single or double, convergent or divergent. The pupils are sometimes contracted, sometimes dilated, though they may be both during the same day. There is usually more or less inequality of the pupils, and a feeble, if any, response to light, there being in severe cases none whatever.

Oscillation is often present. Photophobia is usually present if consciousness be retained. Conjunctivitis often occurs, while in some cases the entire eye becomes inflamed, ulceration of the cornea having

been observed. Deafness is more frequent than loss of sight, there being in nearly all cases a more or less deafness, with intolerance of noise and tinnitus aurium.

Sometimes a more severe otitis occurs, leading to suppuration and an otorrhœa extensive enough to result in tympanic perforation. In some cases there is a suppurative inflammation of the internal ear, particularly of the labyrinth, being bilateral and causing permanent deafness.

As recovery approaches the restlessness, insomnia and headache remit, and finally disappear, while the muscular paralysis, pains in the back and neck and stiffness of the nape of the neck persist, and in all cases the convalescence is tardy. In a few cases under my observation a remittent character was observed, the recurrences varying from three days to about two weeks. Each recurrence was marked by symptoms approximating the initial stages of the disease, lessening in intensity at each period, the patient finally recovering. Being free from malaria here, we cannot trace the periodicity to a malarial origin, unless it might be a latent malaria developed during the disease. It is possible that it is a rare type of meningitis, possessing an intrinsic property of periodicity, as described by Lanschman* and Henoch.†

Sometimes the patient, convalescing nicely, apparently, is seized with a chill and dies suddenly, while in other cases the patient gradually gets worse and dies from inanition and general marasmus.

Differential Diagnosis.—Cerebro-spinal meningitis may be confounded in children with pneumonia, as convulsions often usher in both, but where there is any doubt, a careful physical examination of the chest will at once remove the doubt.

At all ages it may be mistaken for typhus, small-pox, tubercular meningitis, pernicious malarial fever and acute myelitis. It has been mistaken for scarlet fever, hysteria and typhoid fever, but a knowledge of the symptoms, course and natural history of these diseases, should make a differential diagnosis easy.

In typhus we have the characteristic eruption, appearing on the fifth or sixth day, and the high range of temperature, while in cerebro-spinal meningitis the intense cephalalgia and rachialgia, the convulsions, delirium and vomiting should serve to distinguish them.

*Pesther, Med. Chir. Presse,

†Contral. b. f. Klin. Med., Feb. 5, 1887.

In acute myelitis the reflex power is diminished or wholly lost, while in meningitis it is exaggerated. Pressure on the spine in myelitis causes a severe pain, not increased by motion, while in cerebro-spinal meningitis it is the motion, rather than the pressure, that causes pain.

In tubercular meningitis the onset is slow and gradual, while in cerebro spinal meningitis it is abrupt, the maximum intensity of the symptoms occurring in the first few days.

In small-pox the temperature is higher than in cerebro-spinal meningitis; in small-pox the pain in the head is frontal, while in cerebro-spinal meningitis it is usually occipital. The eruption of small-pox clears up the diagnosis, being characteristic, and appearing on the fourth day.

Treatment.—Since epidemics of cerebro-spinal meningitis are more prevalent and severe in those localities in which lack of hygienic measures prevail, it is evident that measures looking to the removal of these conditions are of the first importance for the prevention of this disease. Pure air, good food, avoidance of over-crowding, a quiet and regular mode of life, cleanliness of the streets and apartments, perfect sewerage and drainage, the prompt removal and destruction of all refuse matters, in fact, the strictest observance of all sanitary precautions and requirements, in every particular, will no doubt diminish the number and severities of the cases, and not only of this disease, but of all others of its class, such as diphtheria, typhoid, etc. In nearly all the cases which occurred in this city, upon careful examination, you will find some particularly bad hygienic conditions in the premises or surroundings. In one case I call to mind, the father, mother and three children occupied one room as a sleeping and sitting room, and it was not a large one either. All of the children had cerebro-spinal meningitis, two dying. In another, there were two families living in a single room, which was about ten by twelve feet, with a ceiling nine feet high. Is it any wonder that these people sicken and die? But they should not be allowed to infect others living near, and the State Board of Health and the local health authorities should be empowered to regulate this over-crowding and huddling in dark, damp holes, which is so common among the negroes and lower class of whites. Property-holders should be heavily fined for allowing any negligence

of sanitation, and when a locality becomes, or is, thickly settled, the use of well-water must be given up.

The patient should be put in a dark, cool room, isolated, if possible, and removed from all noise and confusion. The diet should be of the most nutritious kind and easy of digestion, and for this milk is to be preferred. A free action of the bowels should be obtained as soon as possible, and they should be kept open. The condition of the bladder must be looked after, the catheter being used, if necessary. Neglect of this has sometimes caused cystitis. Venesection is contra-indicated in this disease. Being in its nature an asthenic disease, we should seek to support, rather than reduce, the strength. After the acute stages have passed, the alcoholic stimulants are indicated, but not before.

In selecting the proper remedies it will assist us to recall the condition we have to treat. In the first days, during which we have the greatest mortality, we have an intense inflammatory congestion of the meninges of the brain and spinal cord, together with an exaggerated reflex irritability of the cord. The indication is for something to lessen this congestion and inflammation and to lessen the reflex activity of the cord.

I think that opium stands at the head of our list of remedies. It not only relieves the pain, restlessness, insomnia, delirium and convulsions, but it also increases arterial tension, contracting the arterioles of the central nervous system, and thereby lessens the amount of cerebral blood, causing a more or less anæmia of the brain. It also lessens reflex activity of the cord, thus filling all our indications. It should be given to its full physiological extent, keeping the patient fully under its influence until the stage of effusion is reached, when the dose should be lowered. There seems to be a marked tolerance of opium in this disease, some patients getting $\frac{1}{2}$ grain of morphia every two hours for twelve hours without any evil effect. One physician says he often gave a grain or a grain and a half of sulphate of morphia hypodermatically when he first saw the case, repeating whenever necessary. Bartholow, Bristow and Loomis all agree as to its efficacy. Stillé gives 1 grain of opium every hour in severe cases, and every two hours in mild ones. Von Ziemssen says: "Beyond doubt, morphia may be considered the most indispensable medicine in the treatment of cerebro-spinal meningitis."*

*Pepper's System of Medicine.

Ergot may be useful by its action on the arterioles of the brain and cord, and is highly recommended by some, though I doubt its efficacy. J. Lewis Smith relies almost entirely upon the bromide of potassium in large dosage. It diminishes the hyperæmic condition of the nerve centres by causing a contraction of the minute arterioles, and at the same time lessens the reflex activity of the cord, Quinia seems to have no effect upon the course of the disease, although it is used by some with apparent good results.

Mannkoff has recommended cannabis indica when the cerebral symptoms are severe. Davis recommends physostigma from its known sedative action on the cord. If given in a case in which there is marked muscular contraction, trismus or opisthotonos, physostigma will, within a few hours, relax the patient completely, but its action is not permanent, and it must be watched closely. In conjunction with morphia, its use has been very satisfactory to me. Antipyrin in certain cases acts very nicely, lowering the temperature and lessening the pain in the head and back. It also has somewhat of a sedative action, usually producing quiet and sleep in a few hours after taking. The dose usually given is from 5 to 10 grains by the mouth or from 20 to 30 grains by the rectum. Iodide of potassium may be used in the latter stages when we think there is an effusion.

Blisters to the back and neck are sometimes of service after the acute stages have passed. Both hot and cold applications to the head and spine have been recommended, and both are sometimes useful. Sometimes a hot bath does good, quieting the patient and bringing the blood to the surface, lessening the internal congestion.

When compression supervenes, from a large effusion, whether of pus or serum, endangering life, trephining and washing out the cranial cavity might be tried. I do not know of any case in which this has been done, but I think there is a slight field for this operation. Of course it would have to be done under the strictest aseptic precautions.

Good nursing is essential to recovery, many patients dying for want of this alone. When convalescence is established, the vegetable tonics, iron and arsenic, are useful. Electricity may be used in some cases. All excitement should be avoided, as it is especially dangerous now. The diet should be as nutritious as possible, and if the patient can afford it, a change of climate should be advised.

Summary of the Epidemic in Asheville, Commencing Early in January and Continuing until April 1st.—There were about 125 cases, of which I collected notes on 99. Of this 99.52, or $52\frac{1}{2}$ per cent. recovered, making the mortality rate $47\frac{1}{2}$ per cent. The proportion of males and females was about the same. The average age was about 11 years, 74 or 80 per cent. occurring in children under 15 years of age. The youngest patient was 10 months old and nursing at its mother's breast; the oldest was 38 years of age. The highest temperature recorded was $107\frac{1}{2}^{\circ}$ F., the lowest being 97° F. The average duration was three and three-fourth days, all but one of the patients who lived after the sixth day dying. As to the cause, I think that, while still open to investigation, bare sanitation and hygiene has a direct causative influence upon this disease. Of the 99 cases collected, in none of them did the patient live on high ground where drainage would be good. Of these cases 67, or 68 per cent., were reported notably bad, only 10, or 11 per cent., being reported good, the remainder, 22 per cent., being reported fair. But in these last two classes no investigation was made as to sanitation by the attending physician, and so it is quite likely that unsanitary conditions did exist, but were not observed. A point I would like to direct the State Board of Health to in its investigation of this disease is this: In all the cases in which I could gain information, well-water was used in preference to the city water, which is brought from some distance from town, and is distributed through pipes. Persons living in exactly the same condition and surroundings, if anything is worse, but, using the city water, were exempt from the disease, while neighbors, better in other ways, but using well-water would be taken ill with it. Again: On one side of a certain street there were several cases of meningitis, while on the other side, though apparently the same class of people, no cases appeared. On the first side well-water was used exclusively in those houses affected, on the other side the city water. This is only a pointer for some investigator to work on, but will bear close attention. Heretofore Asheville has been in a rather poor sanitary condition, but since the epidemic last winter, which, by the way, commenced in cold weather, the authorities have commenced to clean up, and we will shortly have a sewerage system, and I doubt if cerebro-spinal meningitis appears again. The only and the proper way to control these infectious diseases is to take all power from the civil authorities and put it into the State Board of Health with power to enforce proper precautions and observances of sanitation.

DYSENTERY—THE ANNUAL ESSAY.

By W. C. GALLOWAY, M.D., of Snow Hill, N. C.

(Read before the Medical Society of the State of North Carolina,
at Fayetteville, May 8, 1888.)

*Mr. President and Gentlemen of the Medical Society of the State
of North Carolina:*

When I reflect upon the large number of brilliant and accomplished physicians composing the State Medical Society, I am at a loss to understand why your partiality should have selected a lilliputian like me to play the difficult and trying rôle I now undertake as your Annual Essayist. I am not unmindful of the honor conferred, and I appreciate it; and I am here, not because I expect to delight your senses by reading some new, striking and original matter, but because I feel it a duty to respond with my little mite when the preference of the Society imposes the task; and no gentleman, in my opinion, should shirk the responsibility, unless debarred by some peculiar idiosyncrasy.

I have chosen the hackneyed subject of Dysentery for two reasons: One is, I have had some experience with the malady, and the other is, the time is opportune, the harvest being ripe for the sickle and the occasion eminently appropriate.

Dysentery is a disease of the large intestine, characterized by congestion, inflammation, infiltration and ulceration of the mucous membrane, attended with tormina and tenesmus, followed by frequent discharges of mucus, blood, pus and tissue débris.

It may be acute or chronic, sporadic or catarrhal, endemic and epidemic. The synonyms are just twenty-four in number, some of which are sesquipedal in length, and to nominate them would simply conduce to the consumption of time in a brief and imperfect dissertation like this.

HISTORY.

Dysentery, or the bloody flux, as it is commonly called, is almost as old as the everlasting hills, and will doubtless keep them company many years hence. Eve merited the first case for tampering with the forbidden fruit. It was well-known in Hindostan nearly three thousand years ago, and it is included among the chief Bible

diseases: "And it came to pass that the father of Publius lay sick of a fever and of a bloody-flux: to whom Paul entered in, and prayed, and laid his hands on him, and healed him. So when this was done, others also, which had diseases in the island, came, and were healed." There was, evidently, an epidemic at Melita, now Malta, at that period. The Greek historian, Herodotus (B. C. 443) states that it and the plague reduced the army of Xerxes on the desert plains of Thessaly. Hippocrates, the Father of Medicine, ably described it in strong, round, flowing, polished sentences, 420 years before the Christian era. Celsus, Aretæus, Galen and others wrote of it most graphically. The latter first used the term *scybalæ*. Cælius Aurelianus announced that, though the discharges in dysentery were frequent, it should be classed among the diseases that constipate the bowels. Opium was first used, combined with galls, by Diocles about 300 B. C. The classic authors of Greece and Rome so accurately and minutely portrayed the leading symptoms of dysentery that they have left little or nothing for modern writers to add. With the approach of the Dark Ages, which covered a period of nearly eight hundred years, and stretched from the seventh to the fifteenth century, medical science, together with general literature, as it were, hung its harp on the willow tree, was narcotized and palsied during the impenetrable gloom of the long and melancholy night, and never awoke to tuneful melody and active life until the birth of the sixteenth century. As soon as the mists begun to clear away we notice the sturdy pioneers in the noble healing art making rapid strides upwards and onwards, among whom I mention Sennertus, Sydenham, Pringle, Stoll, Vogel, Meyer, Zimmerman, John B. Morgagni, and a number of other resplendent luminaries who have added valuable contributions to the anatomical lesions of dysentery. Our present morbid anatomy of the disease is based principally upon the scientific researches of Virchow.

The most voluminous and, possibly, the ablest and most literary article that has ever been written upon the subject of dysentery, either in ancient or modern times, is the treatise by the scholarly Woodward, of the United States Army.

ETIOLOGY.

Dysentery is no respecter of persons. It attacks the young and

the old, the rich and the poor of every tribe and tongue alike; but it loves squalid poverty the best on account of its dirty and unwholesome surroundings. Zimmerman asserts that infants whose mothers have dysentery are born with it.

“From Greenland’s icy mountains,
From Afric’s sunny fountains”

dysentery is indigenous. Like the wandering Jew, it is ubiquitous. Wherever man can subsist, no matter how hot or how cold, there it will be to torment the fundament and bid defiance to medical progress. It puffeth up itself in the loftiest mountains, its meekness is seen in the lowest valleys, and it sometimes takes a voyage for its health upon the high seas.

Its special habitat, from which it seems it never can be weaned, and where it goeth about like a roaring lion, is the country adjacent to, and lying between, the tropics of cancer and capricorn. I might say that it is a fearful simoon in the torrid zone, and only a gentle zephyr near the poles. It is more frequent and malignant in hot climates, rarer and more mild in temperate regions, and nearly always sporadic and comparatively seldom fatal farther north or south. Draw a line from east to west near the 52d degree of north latitude, beginning at Mt. Yaman, running through Warsaw, Berlin, London, Upper Newfoundland, Lake Manitoba, Southern British Columbia and Upper Mongolia, and north of this, save in its catarrhal form, dysentery scarcely ever happens. The same is true of the 52d degree of latitude south. But as seagulls, stormy petrels and the finny tribe inhabit mostly that part of the globe below the 52d degree of south latitude, it need not be here seriously considered.

Shakespeare, the unrivalled poet of Nature, who has strengthened and embellished every theme that he has touched with his magic quill, mentions “guts-gripping” among “the rotten diseases of the south.” It would not be improper to state that dysentery in India is as rank as the weeds and the smell. In a letter to Mrs. Drummond Lord Macaulay writes of it: “We have our hare of the miseries of life in this country. We are annually baked four months, boiled

four more, and allowed the remaining four to become cool, if we can. At this moment the sun is blazing like a furnace. The earth, soaked with oceans of rain, is steaming like a wet blanket. Vegetation is rotting all round us. Insects and undertakers are the only living creatures which seem to enjoy the climate. The rainy season of 1837 has been exceedingly unhealthy. Our house has escaped as well as any, yet Hannah is the only one of us who has come off untouched."

In Hindostan dysentery causes three fourths of all the deaths. According to Frank the disease in Egypt is *post pestem maxime timendus*. One-half of all the autopsies made by Griesenger in that country showed dysentery as a primary or secondary affection. It is also perennial there and rages "murderously" in Peru. Continued heat, moisture, vegetable decomposition and sudden changes in the air are the elements that breed it. It seems to love summer as well as a Hottentot. Hirsch mentions 546 epidemics, 404 of which prevailed in the summer and fall, 113 in the fall and winter, 16 in the spring, and only 13 in winter. Fourteen-fifteenths of all of them occurred in the months of June to September. Of 1,500 deaths from dysentery in Boston, New York, Philadelphia and Baltimore, from 1816 to 1827, 1,100 happened in the months of July, August and September. Our census reports, from 1860 to 1870, show the maximum mortality in August and September, minimum in January and February. Where it is endemic or sporadic, excessive heat may cause it to be epidemic. We have examples in England in 1540, Germany in 1583, and in the United States in 1847. But heat alone is not sufficient to generate it, for it occurs in the tropics in winter, and in the severer climates during the cold season. In the city of Cincinnati, in the summer of 1881, the thermometer registered 95° F. for several consecutive weeks, and at night it often ran up to 100°, but the records state that while heat-stroke was common dysentery was rare. Moisture conduces to vegetable decomposition, but there is abundant testimony to prove that it can only exercise a predisposing cause in generating dysentery. Of 119 recorded epidemics 62 were in wet and 57 in dry weather. Of 13,900 cases in Bengal the cool season produced 2,400, the warm and dry season 4,000, and the warm and moist period 7,000. Burkhardt asserts that out of 10,000 subjects one-half will

occur in wet hot seasons, two-fifths in dry hot seasons and one-tenth in cold seasons.

Malarial districts are prone to dysentery, but it likewise prevails in dry sandy places where malaria is unknown. Annesley says: "All situations which furnish exhalations from the decay of animal or vegetable productions under the operation of a moist and hot state of the atmosphere, will always occasion dysentery in the predisposed subject—circumstances which, with other causes, combine to generate the disease." Sudden changes in the air are supposed to contribute to dysentery. This is the opinion of most of the Hindoo physicians. One of them states that in the Trans Caucasus "the sultry heat of noon often alternates with a cutting cold wind and *vice versa*. In the same place is now a warm, now a cold, now a glowing hot breeze, and such changes most predispose to dysentery. Didelet remarks of South France: "It is not the fruits, as people believe to-day, which act as causes of dysentery, but the sudden variations of the air." According to Moseley, "it often happens that hundreds of men in a camp have been seized with dysentery almost at the same time after one shower of rain, or from lying one night in the wet and cold."

I might go on *ad infinitum* and multiply the experience of others upon this point, but it would be superfluous to do so when the facts are so generally believed. Of course it would be the height of folly to suppose that a true dysentery could be alone generated by mere increase or reduction of temperature. Such might light the torch after other causes prepared the fuel. There is no doubt that nervous impressions play an important rôle in the production of dysentery. This is well established in prison life. The deficient and badly-cooked food, scant, dirty clothing, filthy surroundings and crowd-poison in prisons, outside of the nervous impressions, evidently should be taken into account. We know that dysentery is one of the frequent troubles of the insane. Whether it is due to external causes or to the fact that the colon is often elongated or displaced in lunatics, and that they suffer a great deal with constipation, it is difficult to determine. Unripe fruits, acrid, irritating, undigestible food and polluted water have all been considered factors in the genesis of the disease by both old and present writers. It is now held that drinking water contaminated by excrementitious matter, particularly the dejecta of disease, is as positive a source of

dysentery as of typhoid fever. Decrease in the number of cases has been repeatedly reported as soon as better and purer drinking-water was procured. There is a larger residue from eating vegetables than from any other kind of food, and the tropics abound in vegetables. In the large intestine, the contents of the bowels becoming harder from absorption, are propelled more slowly forward and tend to fret and inflame more or less the mucous membrane. Such a condition might very readily accelerate dysentery.

Those who have given the most labor to the subject of dysentery are convinced that in its epidemic visitations it is due to some special miasm emanating from the soil. Some sudden outbreaks cannot well be explained in any other way; but the precise nature of the morbid product is yet unknown.

Micro-organisms swarm in healthy stools and render their study in disease exceedingly difficult. Woodard declares that "a large part of the substance of normal fæces is made up of these low forms in numbers which must be estimated by hundreds of millions in the fæces of each day, bacteria, micrococci and torulæ being found floating in countless multitudes along with fragments of partly digested muscular fibres and other débris from the food." Though the torulæ may be, and often are, increased, the other micro-organisms are the same in dysentery as in healthy fæces.

Prior claims that he has discovered a micrococcus as the true micro-organism of dysentery; and Koch has found a special bacillus for the same disease, but whether or not it possesses genetic properties, he is still unable to determine. Animal parasites and vegetable fungi have been mentioned among the causative elements in the production of dysentery. The ancient contributors to the literature of the subject held that it was contagious or infectious. They believed that it was communicated by clyster pipes, contaminated latrines, dejecta, bed-pans, washer-women, physicians, nurses, etc. It was known to spread from house to house and from street to street. But surgeons in the Franco-Prussian war and those of our own country in the recent civil war testify that it was never carried among the people by any of the numerous cases on their return home. Recent writers mainly consider it as holding a place between the contagious and non-contagious diseases. It may spread through the medium of the air or by discharges down with the evil. Observations are recorded where dysenteric stools have been thrown into privies and individuals employed to clean them

out ten years afterward have been infected with the poison. These experiences go to prove of this, as of other similar or analogous affections (e. g., typhoid fever), that the virus or microbe of the disease finds its most favorable nidus in vaults, cesspools, sewers, etc. When the poison is exposed to the air it is much more speedily destroyed, but it is in the meantime, of course, a possible conveyer of the malady. I am slow to believe that the system ever becomes contaminated by long sessions at stools, as some suppose.

If the mucous membrane, which is alike throughout the entire alimentary canal, could be affected in any such manner, the Barkises are safe, but the Micawbers, particularly if they are suffering with stomatitis, are doomed beyond peradventure. The idea is new and original, but doubtless a fancy of perverted imagination. In its general character dysentery resembles cholera, possibly, more than any other disease, and typhoid fever next. As no specific contagium vivum has ever been found for it, positive contagiousness cannot be established. Dysentery is the scourge of army life and is more fatal than all other diseases. Aitken says "it has followed the tracks of all the great armies which have traversed Europe during the continental wars of the past two hundred years." It was worse than the plague in Napoleon's campaign in Egypt. Kinglake states that 5,000 men died of dysentery alone in the Crimea. Concerning dysentery Woodward relates the following: "Soon no army could move without leaving behind it a host of the victims. They crowded the ambulance trains, the railroad cars and the steamboats. In the general hospitals they were often more numerous than the sick from all other diseases, and rivalled the wounded in multitude. They abounded in the convalescent corps, and formed a large proportion of those discharged for disability."

Whether or not it is due to improved hygiene, in this wonderful age of the nineteenth century, it is hard to tell; but certain it is, if statistics are not a snare and a delusion, that the ravages of dysentery are on the decline. Let us hope that sanitation is the forerunner and promoter of this glorious result. Heberden, of England, gives 1,000 or more as the annual death-rate in the seventeenth century, some years exceeding 4,000, whereas in the last century only 200 deaths were recorded. According to Aitken, as a factor of death it has been decreasing since 1852. In England it was six to eight times greater during the forties than now. Like reduction has taken place in Sweden and Bavaria—37,000 cases,

with over 10,000 deaths, are reported in Sweden alone in 1857; to-day there are only 400 or 500 a year; and the mortality has declined correspondingly from 20 to 30, as low as 6 to 8 per cent.

MORBID ANATOMY.

The difference between sporadic and epidemic dysentery is mainly in extent of surface involved and the degree of inflammation and ulceration set up. In the former the lesions are rarely ever deep or widely diffused, and affect principally the lower bowel. In the latter they are generally prominent and extend over the entire large gut and sometimes beyond. The first pathological change is the same in both, it being impossible to tell one from the other; and it is similar to inflammations in mucous membranes elsewhere. There is more or less hyperæmia of the mucous membrane which presents several shades of color, varying from a slight inflammatory blush to a deep madder or purplish red. The color and the hyperæmia are not uniform throughout the diseased surface, being most marked in the descending colon, sigmoid flexure and rectum. Soon the mucous membrane becomes irregularly swelled, softened and pulpy, and is most distinct at the projecting folds. In very mild cases the inflammation, with few exceptions, is limited to the rectum, and only a small number of prominences, together with slight ulceration, are present; graver injuries scarcely ever occur; but in severer attacks the prominences or protuberances are numerous, and, at times, coalesce and give to the surface a lobulated appearance resembling bird's-eye views of mountain chains. In the primary stage the follicles of Lieberkuhn are enlarged, prominent and racemosed and vary in size from a millet seed to a small pea. They expand by increase of their cell element and a whitish, albuminous exudate is thrown out. Their wall capillaries rupture by distention and fill their cavities with blood. Disintegration quickly commences and the expanded follicles burst, forming ulcers. The ulcers are usually oval, frequently spread out and run together, leaving large, irregular, ragged, excavated surfaces. They generally extend in the direction of the folds of the mucous membrane and present a diversity of appearances in the same subject. They are either large or small, round or irregular, superficial or deep, and may be pale or red, angry and irritable. Some are covered with lymph, others with serous fluid. The tubular glands suffer proportionately. The ulcers almost

always extend to the muscular coat and sometimes to the serous layer. Vascular tufts, described by many as polypoid growths, may form between the ulcers and have been mistaken for tumors. The mucous membrane of the colon and rectum is poorly supplied with blood, and as a consequence a rapid, destructive, croupous or diphtheritic inflammation may cause a large portion, or all of it, to become a black, charred, shaggy, rotten mass, which is occasionally thrown off in extensive tubular pieces. When this occurs around the ileo-cæcal valve, invagination or other serious obstruction may result. "Some observers are of the opinion that in rapidly sloughing dysentery the process begins by a submucous purulent cellulitis, which detaches the mucous membrane, this membrane then becoming gangrenous. Many pathologists regard coagulation-necrosis as the basis of all dysenteric processes in the follicles and tubular glands." At times the muscular tunic is thickened, easily fractured, and exhibits a whitish gray hue. In grave epidemics the serous coat, in many instances, is covered by a dark, thin, ichorous exudation.

The intestine, in numerous cases, becomes expanded and is filled with a deep brown or black, foul-smelling, inflammatory product. Putrid coffee-ground fluid is indicative of malignancy. When extensive exfoliation of the mucous membrane occurs, with destruction or marked injury to the deep structures, the edges of the ulcers fail to unite and large cicatrices are formed, causing "valve-like" or "annular" folds which constrict the gut and diminish its calibre. In rare instances the ulcers lead to perforation and peritonitis, and if perforation happens in the cæcum or rectum, fecal abscess may follow. Congestion of the liver is frequently associated, and this organ is sometimes the seat of abscesses, which occur much oftener in hot climates. If multiple, they are likely due to pyæmic poison set up by dysentery; if single, they are considered purely accidental. The mesenteric glands are now and then very much enlarged and softened and present a livid or deep blue color. In some cases they contain more or less pus.

The following are some of the complications: Pnenmonia, pleurisy, gangrene of the lung, pericarditis, softening of the spleen, corneal ulcers, nephritic fatty degeneration, congestion of the brain and membranes and subarachnoid dropsy, acute bronchitis, paralysis, hydrops, scurvy, erysipelas, variola, rheumatism and malaria. In chronic dysentery the mucous membrane is dense, tough and unyield-

ing, and the intestinal cavity is diminished. The ulcers are sluggish, heal slowly and complete cicatrization is the exception. Multiple abscesses of the liver often take place and polypoid tumors are met with.

CLINICAL HISTORY.

In several instances all the symptoms of dysentery have been masked and the disease could only be recognized after a careful autopsy. J. F. Hammond reported a case with mania and involuntary diarrhœa, but no trace of blood or mucous could be detected in the stools. The mucous membrane of the cæcum and rectum was swelled and in a sloughy necrosed condition and the colon was perforated in two places. Some few of the most malignant attacks are so violent as to overwhelm the constitution at once like the worst forms of Asiatic cholera. The great majority of cases are preceded by premonitory symptoms. There is a feeling of general indisposition attended by thirst, dry skin, coated tongue, slight fever, deficient appetite and uneasy sensations in the abdomen, with mild colicky pains and diarrhœa. Then follows griping, grinding, twisting pains (tormina) in the bowels, accompanied by an urgent, irresistible, almost constant desire (tenesmus) to stool. The evacuations are usually small, but fraught with big expectations, and consist chiefly of mucus or mucus streaked or mixed with blood, with now and then feculent matter containing some hard, roundish lumps called scybalæ. Although the discharges are scant, they are frequent, and during the first week the albuminous matter passed amounts to about two ounces daily. They occur from twelve to twenty-four, and may reach as many as two hundred times in the twenty-four hours. With some patients, to speak metaphorically, there is a nest of hornets in the rectum and the commode is in constant demand almost the livelong day. The chief source of suffering is due to tormina and tenesmus. The degree of exhaustion and emaciation is out of proportion to the mildness of the attack. Improvement, if it occurs, and it almost always does, commences in a few days and recovery is complete in the course of a week thereafter. Graver cases last from ten to twenty or more days, and may be ushered in with a distinct chill or rigors. The symptoms resemble pretty much those of the milder type, only they are intensified and more alarming. The pulse is fast and feeble, often reaching from 105 to 120, or faster. The temperature ranges between

100 and 104. The countenance is pale and anxious, and the tongue heavily coated white or brown, and may be moist or dry. Nausea and vomiting are frequent, the strength rapidly wanes and great nervous prostration is present, with irritability and restlessness. There are tenderness and pain over the course of the diseased bowel, located mostly in the left iliac fossa, and any kind of solid food taken into the stomach is followed by churning, griping pains and expulsive desires. Tympanites is an accompaniment and mild or active delirium may be associated. The evacuations change in character—they are more copious, brownish or brownish-red in color, and contain sloughy, stringy shreds, resembling “washed raw meat” (the *latura carniū* of the old writers), mixed with blood or purulent matter, or they present a greenish appearance like spinach. A large quantity of pure blood is sometimes passed. The urine is high-colored and diminished. Micturition is frequent and painful, and strangury occasionally occurs. The large intestine does not alone suffer, but all of the juices engaged in digestion are either altered or checked.

In the worst types the fever is marked, the pulse is very weak, rapid, irregular and compressible, reaching 130 or more per minute. The tongue is dry and red or black, glazed or furred. Thirst is great and urgent, sordes appear upon the teeth, violent delirium may or may not set in, the countenance is anxious and cadaveric, the surface cyanosed, emaciation appears early, and the body is hot and the extremities cold. The discharges are large, dark, bloody and purulent, and their odor in some cases is about “the vilest compound of villanous smell that ever offended nostril,” and is compared to carrion or the intolerable smell of a deep suppurating burn, involving extensive area of surface. Microscopically the stools “present abundant epithelium cells, blood, exudation and pus cells, and remnants of the membrane. Peculiar cells and other bodies have also been described.” Children often suffer with vomiting and convulsions, and, at times, the intensity of the tenesmus produces prolapsus ani.

Death is foreshadowed by irregular pyrexia, exacerbation, diminished tormina and tenesmus, bloody, copious and involuntary passages, hiccough, subsultus tendinum, cold, clammy perspiration, thready, flickering pulse, hollow eyes, hippocratic countenance and collapse.

DIAGNOSIS.

When dysentery exhibits all of its common symptoms it is recognized without difficulty, but when its characteristics are masked, as in Hammond's case, only a post-mortem could possibly settle its nature. Fortunately such cases are extremely rare. The tormina and tenesmus and the peculiar muco-sanguinolent and scybalous discharges are considered pathognomonic; but as some few diseases resemble it to some extent discrimination is necessary.

It may be mistaken for diarrhœa with hæmorrhoids, rectitis, intestinal catarrh, cancer or polypus of the rectum and malarial hæmorrhagiæ. An examination of the rectum will establish the character of a diarrhœa with piles as well as that of cancer and polypoid tumors, acute rectitis is ushered in with cramping, colicky pains and constipation, while dysentery, almost certainly, begins with diarrhœa, and the dysenteric stools contain mucus, pus, blood and scybalæ. In intestinal catarrh, as a rule, the mucus and blood are not commingled in the passages, and there is absence of the peculiar dysenteric odor. Tenesmus is wanting, the discharges are profuse and the constitutional symptoms are less striking. Frequent vomiting and abdominal meteorism, with sudden collapse, indicate intussusception, and in that trouble there are no scybalæ and the stools are without the characteristic smell. I mention malaria hæmorrhagica as a novelty, as it is nowhere alluded to in the text-books.

In 1887 I was called in consultation to see an ugly, typical case of acute dysentery, and the attending physician, a very good one, too, was treating it for malaria hæmorrhagica. The large amount of blood from the bowels misled him. There was no hæmorrhage from the kidneys, and the striking, never-to-be-forgotten, jaundiced hue was absent. Besides, tormina and tenesmus were present, with numerous muco-sanguinolent discharges—the blood in them predominating.

PROGNOSIS.

This is favorable or unfavorable according to the mildness or gravity of the attack. It varies between great extremes. Serious complications render it unfavorable. Mild cases tend to recovery, malignant ones to death. Some epidemics are marked by a frightful mortality, particularly in army life. Trousseau called it the most murderous of all diseases,

TREATMENT.

To prevent the spread of dysentery it is advised to use hygienic measures. The stools should be disinfected as soon as they are discharged by sprinkling with pulverized copperas or slacked lime, or by pouring over them crude muriatic acid. They should then be mixed with sawdust or some other combustible material and burned, or they should be emptied into holes in the earth two or three feet deep, away from wells, cisterns, etc., and properly covered. The sick room should be freely ventilated, the bed-linen frequently changed and thoroughly boiled in water, and the receptacles should be kept scrupulously clean. The drinking-water should be the purest that could be obtained, and if there should be any reason to suspect impurities it should be well boiled. Sufficient clothing and proper food are exceedingly important, and individuals should be careful not to catch cold.

The National Dispensatory enumerates just ninety-five remedies for dysentery, but the following, judiciously selected, will meet the demands in the great majority of cases: Opium in some form, clysters, medicated or not, ipecac, subnitrate of bismuth, Epsom salts or castor oil with turpentine, rest and diet, with, sometimes, soothing applications to the bowels.

The very mildest cases need not necessarily take the bed, but they should keep the recumbent position. Quiet and diet will speedily cure them. No solids should be allowed. Water and milk will be sufficient in the way of drink and food. If milk cannot well be taken, meat soup or egg-nogg may be substituted. A little starving will not be injurious. However, I cannot see any impropriety, even in the mildest cases, in administering ten or fifteen grains of pulverized ipecac at once, and then use per rectum to prevent tenesmus, if annoying, $\frac{1}{2}$ gr. morphia in solution or suppository, or $\frac{1}{2}$ gr. hypodermically. Repeat the dose whenever required. Or give 1 oz. Rochelle salts, or a Seidlitz powder, or two tablespoonfuls of castor oil with 10 drops of spirits turpentine—flush bowels with a quart or more of warm water, and use Dover's powders in usual doses to quiet. A very eligible prescription, where one has any misgivings of large doses of ipecac, is morphia $\frac{1}{2}$ gr., pulverized ipecac $\frac{1}{2}$ gr., and subnitrate bismuth 5 grs., to be given every hour or two until tormina and tenesmus are subdued. It should be preceded by a purgative, and it may be given in capsule or in syrup of tolus or any nice syrup, or at the bedside in the country

in treacle, honey or sweetened water or water. The ipecac and bismuth may be given per orem and the morphia hypodermically. In severer cases the patient should go promptly to bed and remain there until well. Treatment may be begun with one of the purgatives already mentioned, or 30 grains of ipecac, in capsule or suspension in a fluid mixture may be taken, after which, for three or four hours, no food is to be allowed, and thirst is to be assuaged with a little crushed ice, or by sucking lumps of ice, or by taking very small quantities of cold water, or sangaree, or vinegar and water. Pardon a digression right here. The books talk glibly and glowingly of ice and numerous delicacies that can be commanded by well-to-do people, and it is all well enough, but such information will stand a poor country doctor in bad stead when he is ten miles from town in some little old log-cabin in the lane or woods, or wherever, indeed, the genial sunlight of heaven may peep through the crevices. Ice is out of the question—the days of miracles have passed—no manna will fall—milk and honey without money will not always flow by the door, and brandy is difficult to obtain. A little corn-bread and pork and garden truck are about the only luxuries obtainable. Folks a little higher are very nearly in the same predicament. These cases happen right often, particularly among the negroes, and the doctor who can make the most of the ugly surroundings is a real hero. After the large dose of ipecac smaller quantities may be required in the course of eight or ten hours.

Ewart, who is a great admirer of ipecacuanha, bestows upon it this eulogy: "It produces all the benefits that have been ascribed to blood-letting, without robbing the system of one drop of blood; all the advantages of mercurial and other purgatives, without their irritating action; all the good results of antimony and other sudorifics, without their uncertainty; all the benefits ascribed to opium, without irritating, if not aggravating or masking the disease."

An enema of warm water may be thrown up the bowel; it is often very soothing and helps to bring away the decomposing material held in the intestine. Laudanum and dilute sulphuric acid or nitric acid by the mouth, or morphia hypodermically, may be associated with ipecacuanha. Each case is a law unto itself. Treat the individual and his symptoms as they demand. Turpentine enemata to relieve tympanites, if great. Flannel or thick cloths, wrung out of hot water, sprinkled on the under side with oleum terebinthinæ to soothe the bowels, or warm hop, or mush, or bran poultices, similarly treated with

turpentine, may be used; morphia for pain, restlessness and tenesmus, preferably hypodermically, or in any convenient way; hot wet cloths or poultices over bladder and morphia to relieve strangury; small doses of salts or oil to control costiveness; morphia and ergot to suppress undue hæmorrhage, with perfect quietude; occasionally antifebrin, to reduce excessive heat, or antipyrin, if the heart is good; counter-irritants over stomach and on the back opposite the stomach, for nausea and vomiting.

The diet should consist chiefly of milk, coffee, egg-nogg, jellies, broths and alcohol in some form to suit the patient. Brandy and milk are the best remedies. The milk may be boiled and peptonized if necessary. In the worst forms treatment is unsatisfactory. When the nervous system is profoundly shocked stimulants should be administered immediately and pushed almost to the point of drunkenness. Malaria, scorbutus, rheumatism and other complications are to be treated as they arise with remedies appropriate to each.

Chronic dysentery requires special dieting and careful attention to the general health. Flannel should be used next to the skin, particularly over the abdomen. Warm and sufficient clothing should always be worn. Undue exposure to sudden mutations of the weather should be avoided. Ipecacuanha in small and repeated doses is recommended, and medicated enemas are lauded by some and condemned by others. Loomis speaks highly of cod-liver oil and the pernitrate of iron. An ocean voyage or change of residence to the mountains or seashore will generally alleviate it or effect a permanent cure.

I am indebted for the materials in the preparation of this Essay mainly to the works of Drs. Loomis, Flint, Roberts, Niemeyer, Aitken, Whitaker and Johnston.

Let me here epitomize my own cases—50 in 1886 and 30 in 1887, total 80: 1 adult death—only one ever had in my own practice; mortality among infants and small children not remembered; 2 bad acute attacks took on chronicity; 1 had parotiditis in right gland; 3 had acute articular rheumatism—hips, knees and ankles involved in one, knees in another, and hips, knees, ankles, first joint great toes, shoulders, elbows and wrists in the other—last was sick altogether three months. About four-fifths of the cases between April and July. Pulse normal to 160, temperature natural to 105, malarial complications numerous, but number not known, 11 excessively ill—time 14 to 35 days—complications not included—3 had rigid abdomen like the tonic rigidity in peritonitis—certainly not peritonitis. (This feature not mentioned by any of the books.) Twelve cases, so far, this year, without any special features.

HOW FAR DO THE NEW ANTIPYRETICS SUBSTITUTE QUININE?

By Dr. R. F. LEWIS, Lumberton, N. C.

(Read before the Medical Society of the State of North Carolina, at Fayetteville, May 8, 1888.)

Probably there is no question more interesting to our profession to-day than the one I have, at the suggestion of our President, chosen for this discussion. Professor Austin Flint reached the following conclusion in regard to fevers, which is in accord with the views of the profession to-day :

"Fevers, especially those belonging to the class of acute diseases, are self-limited in their duration, and are each one due to a special cause—a micro-organism, the operation of which ceases after the lapse of a certain time."

We are yet unable to destroy definitely the morbid organisms, which give rise to continued fevers, and we must be content for the present to moderate their action and sustain the powers of resistance of our patients.

Aside from the influence of complications and accidents, the ataxic symptoms in fevers, the intensity and persistence of which endanger life, are secondary to the fever and are usually proportionate to the duration of the temperature. These symptoms are ameliorated by means of treatment directed to a reduction of the general temperature of the body.

Just a few years ago, since many of us began the practice of medicine, many new and valuable ideas along this line have been suggested and taken practicable shape. How many of us to-day could intelligently and satisfactorily treat a case of continued fever without the use of a clinical thermometer? Along with this instrument comes a new line of remedial agents which will eventually be as essential in the treatment of inflammatory diseases, as the thermometer now is, to indicate the degree of bodily heat. Chief among these new remedies are a class of drugs known as *antipyretics*, and those of the greatest importance to us at this time are *Antipyrin* and *Antifebrin* or *acetanalide*. In 1885-'86 the former

of these came into practical use as an antithermic, and this was followed in 1886-'87 by the introduction of antifebrin.

The scarcity of Peruvian bark and the high price of quinine, led to the dream that chemistry would hit upon the synthetic manufacture of quinine, and several times have sealed packages been sent to the Paris Academy of Sciences claiming the discovery of the artificial alkaloid, and as many times have these hopes been blasted, until in 1884 the claims of antipyrin as an antithermic and an analgesic were confirmed. The introduction of these remedies forms a chapter in the history of chemicals which is but the beginning of wonderful things. The antipyretic effects of quinine was not recognized in this drug until a few years ago, and its antiperiodic properties not thoroughly known; the doses prescribed were so infinitesimally small that the effect was scarcely notable. In this fact, no doubt, can be ascribed the very great mortality attending the prevalence of remittent fevers in many parts of our State, especially along the banks of the Cape Fear River. Thirty-five or forty years ago remittent fever was almost as great a scourge there as yellow fever could have been. If a white person contracted this fever on the river plantations death was almost invariably the result. Many of the wealthy planters built elegant residences overlooking the stream, but in the autumn months were forced to fly to the pine woods, and there remain, in dwellings less comfortable, drinking warm surface water (but breathing air uncontaminated with malaria), until Jack Frost put in his personal appearance. Some few years ago I remember to have examined a gentleman who was reared in this section who made application for a policy in a life insurance company, and I was amazed at the answer given to the question, What was the cause of death of grand-parents, parents, brothers and sisters? and of these there were quite a number. The answer in each instance was "bilious fever."

With the lights now before us, and the remedies now in our hands, am I not justified in saying that we could have safely tided over nine tenths of these cases? It may be interesting to contrast the treatment of this disease at that time with that of the present day. I quote from a standard author of fifty years ago: "In cases of bilious fever, when the patient possesses a good constitution, and especially if he has been used to free living, and is suffering much pain, there can be no doubt of the propriety of bleeding, which in

many cases requires a repetition. A puke of 15 or 20 grains of ipecacuanha may then be given to clear out the stomach, and this will sometimes so quiet the spontaneous vomiting that purges and sweats may be instantly used, but when it does not, it will be necessary first to leech and then to lay a blister over the stomach, which often has the happy effect of stopping the vomiting and causing an early remission of the fever. If the stomach still continues irritable, an opening downwards will be more likely to relieve it than any other means. Should this treatment fail in bringing on a free perspiration, no delay should be made, after five or six days, in laying blisters on the ankles, and when drawn dressing them with mercurial ointment, that the gums may become affected; and when the fever has been brought to an intermit, or when the perspiration has been extensive, no delay should be made in using the bark. In low cases, and probably in most of those fevers far to the South, we must not wait for a perfect remission, but begin with the strong decoction of bark the moment the pulse alters for the better, this, however, is not to be done before the fever has run on some days and after the blisters have been applied to the ankles. In such cases there is need of profound judgment, and the physician must first settle in his mind the probable length of the fever from preceding cases, the symptoms, patient's constitution and experience. If the case be of that mortal stamp, that threatens to end unfavorably in five or six days, he must try the bark by the third day or even sooner, but if the patient and fever is likely to hold out into the second week, it would be imprudent to use the bark before six or eight days, unless the remissions were considerable, and this event should be considered in blistering the extremities. Dr. Fowler has recommended his solution of arsenic in those fevers, but never till the bark itself has been tried in vain, so may *quinine*, but not till the bark has been rejected. It would appear that those physicians who recommend *dog-wood bark* and *black-oak bark* and *quinine* as preferable to Peruvian bark are either ignorant of the virtues of good bark, or happily ignorant of bad bilious fevers; such recommendations come from the North, but bilious diseases from the South, and as far as the east is from the west so far should all such comparative trash be pushed from the mouth of a patient that is ill with a dangerous remittent."

The first and leading object in the treatment of remittent fever

to-day, is to arrest or abort the disease by antiperiodic remedies, of which quinine is the surest agent. As soon as the character of the disease is determined by the occurrence of a remission, the sulphate of quinine should be given in full doses of 5 to 15 or 20 grains, and repeated every two to four hours, until it produces slight deafness or ringing in the ears, suspending the remedy when these manifestations of cinchonism appear. If the remedy be not tolerated by the stomach, it should be given per enema. If cinchonism be not produced during the remission, the remedy may be continued during the exacerbation of fever. This is preferable to waiting for another remission.

Aside from the abortive or curative treatment just mentioned, palliative measures are to be employed according to the indications in individual cases. The abstraction of heat by external cold applications, and the reduction of temperature by antipyretics, administered internally, without affecting the special cause of fever, improve the symptoms which are secondary to the pyrexia.

In the treatment of that class of fever known as typho-malarial, which has been so prevalent in many parts of this State, the new antipyretics are secondary in their value compared with *quinine*. In these fevers a rise in the temperature invariably takes place every afternoon, and in those cases quinine does its very efficient work; if 20 to 40 grains are administered in the early part of the day, the temperature will be less in the evening by two to four degrees than it would otherwise have been should the quinine have been omitted. Observations repeated in a number of cases substantiate this fact.

To sum up, then, the relative value of quinine with that of the newly discovered antipyretics, we will conclude that nothing has yet been discovered that will substitute quinine. In the treatment of all fevers of a high grade this drug is indispensable for its antithermic as well as for its antiperiodic effects. This antithermic effect is not produced so energetically nor is it so immediate as that of the newly introduced antipyretics. We are then to receive them as valuable adjuvants rather than substitutes in the treatment of acute diseases.

As far as I have been able to gather it, I will give the history, experiments, as well as the danger attending the administration of antipyrin and antifebrin. They are both products of aniline. Antipyrin is the more powerful of the two drugs, and consequently

the more dangerous. In addition to its very great antithermic properties, it has been found valuable in the treatment of many forms of neuroses. Legrowe reports to the Academy of Medicine of Paris (*Boston Medical and Surgical Journal* for March, 1888) favorable results from its administration in chorea. One gramme of antipyrin is dissolved in 20 grammes of syrup and the whole administered at one dose; three such doses are given in twenty-four hours. By its sedative action on the spinal cord it has proved useful in strychnine poisoning. It has also benefited some cases of epilepsy.

Dr. Larget, of Marseilles (*Therapeutic Gazette* for March, 1888), following the suggestion of Choupee, gave 30 grains of antipyrin in solution, per enema, to relieve labor pains, which seemingly had no effect; a second injection was repeated in an hour, which diminished the pain most remarkably, not affecting the contractions which occurred regularly about every eight minutes—there were no after-pains.

The February number of *Revista de Sciences* contains the report of a case of intercostal rheumatism following herpes zoster in a man of 64 years of age suffering for eight weeks; had been treated with iodide of potassium; 3 grain doses of antipyrin relieved him. Another case of a man suffering with syphilitic ulcers on both tibias, the pain keeping him awake at night, was subdued with this drug in 3 grain doses. Antipyrin has been used successfully hypodermically in the treatment of severe cases of neuralgia of trigeminus, in articular rheumatism, in gastric crises and bronchial asthma.

Numerous cases of poisoning by this drug have been reported. In the *Lancet* of February, 1888, Dr. Oscar Jennings reports a case: The patient was a woman 67 years old, who was of a gouty ancestry, and suffered with swelling of the hands without positive pain, but with sensations of pricking, which interfered somewhat with the use of the hands. She was given $37\frac{1}{2}$ grains of antipyrin three times a day for eight days. When the skin of her arms became covered with erythematous patches, her eyes at the same time became uncomfortable. The following night she scarcely slept at all; the feet were icy; there was no nausea or giddiness. The next day her face was red and extraordinarily swollen, so as to almost close the eyes, just leaving a narrow slit for vision. The rash was general and of

the color of pomegranate and arranged in patches separated from each other by slight but distinct intervals. This condition gave rise to no suffering, there was only slight itching, but the patient felt as if the inside of the body was filled with ice. There was irritation of the nasal fossæ and hoarseness of the voice. The pulse was twice as fast as usual, but the temperature was lowered. There was slight buzzing of the ears. The symptoms gradually disappeared, but the patient still suffered from considerable prostration and sensations of cold. Dr. Jennings says that since encountering the case above cited the following case came under his observation: Mrs. I. was treated with antipyrin in order to be relieved of rheumatic pains. She was ordered 75 grains a day. On the second day some of her friends called upon her. They found her with her head between her hands, the elbows resting upon the knees, rocking backwards and forwards, repeating incessantly, "I don't know what is the matter with me. I remember nothing. I am becoming like an idiot. I am going mad." She was subsequently confined to her bed with severe gastro-enteritis for six weeks, and kept her room for three months. Lately she has improved and gained her lost intelligence.

The *Medical Register* for March, 1888, reports a case of poisoning by antipyrin in only 10 grain doses. A lady took by direction of a physician, for a nervous headache, one of two powders containing 10 grains each. She was otherwise in good health. In three minutes she began to experience a snapping pain in her head, along with itching and burning in the mouth and throat, particularly in the roof of the mouth. This feeling extended also to the eyes, nose and ears, and became so violent that she involuntarily thrust her fingers into her mouth and ears to seek relief, sneezing soon commenced and became violent, the act being repeated at least fifty times, while the nose and eyes were running a very copious watery fluid. The violent symptoms lasted ten minutes, but she did not perfectly recover until the next day.

At our last meeting Prof. Dabney, of the University of Virginia, related a case of fatal poisoning in his own practice by antipyrin. He found his patient, a lady, with an exceedingly high temperature, and administered 30 grains of the drug. He left his thermometer with the nurse, directing 30 grains more to be given at a certain interval unless the temperature had declined to a stated degree.

When the time came for the second dose to be administered, without examining the degree of heat, as Dr. Dabney had strictly enjoined, the medicine was given, which in a short time was followed by heart failure.

Antifebrin or acetanilide was discovered in 1835, and was studied by Menchat Reve, in Germany, in 1882. It is a product of the reaction of glacial acetic acid upon aniline. When it is pure it is perfectly white and has no odor; heated upon platinum foil it should give a colorless fluid, it should volatilize and leave no residue. It ought not to give, with hyperbromite of sodium, an orange yellow precipitate—a sure indication, when this reaction follows, of the presence of free aniline. It is soluble in alcohol, wine or any of the alcoholic tinctures. Compound tincture of cardamon is a good menstruum, but, best of all, it may be administered in capsules.

Prof. Dujardin Beaumetz is of the opinion that this is not a good antithermic, particularly in typhoid fever; given in small doses ($7\frac{1}{2}$ grains) it is liable to produce cyanosis, and may depress the temperature three degrees or more; in apyrexia it produces no appreciable physical effect. (*Therapeutic Gazette* October, 1887.) As an analgesic, especially in locomotor ataxia and in acute articular rheumatism it acts with peculiar energy, and Prof. Beaumetz finds it useful in epilepsy. If it be true that acetanilide depresses the temperature or the nervous system and the respiratory power of the blood, the cyanosis he warns against may be a real danger. It has, however, been largely given by others and is growing in favor as additional experience is obtained with it.

In commenting on the effects of antipyretics Dr. Loomis says that "every practitioner of medicine should put to himself this question, How much can be accomplished by the use of antipyretics in arrest and safe conduct of disease, and are there no dangers attending their employment? Whatever answer may be given, he is convinced that the heroic use of antipyretic measures, which has recently come into general use, the one idea of the modern therapeutists being to reduce temperature at all hazards, has a side danger that should not be lost sight of. If the temperature in a case of fever or pneumonia range about 105° or 106° , and can readily be reduced by mild antipyretic remedies, the condition of the patient at the same time being made more comfortable by their use, he most certainly recommends their employment; but when powerful antipyretic measures

are required to effect temperature reduction, and its reduction is only temporary, he is quite confident that such reductions are obtained only by an expenditure of vital force on the part of the patient, which largely diminishes his chances of ultimate recovery, especially if the hyperpyrexia has been long-continued, having frequently noticed that their daily employment for a prolonged period has been followed by grave nervous phenomena, and the evidence of the most extreme cardiac failure, greater than could have been caused by the high temperature alone. If temperature reduction does not shorten the duration, mitigate the severity or arrest serious complications in disease; if the ratio of mortality is not diminished, as to encourage us that we are making advances by antipyretic measures, on what basis are we justified in their use? Evidently only on the basis that by their use we relieve one of the many phenomena of fever. If this can be accomplished without serious loss of vitality, or at the expense of the reserved force of the patient, we are justified in their use, but do not let us imagine that, by reducing temperature, we are controlling fever.

THE RELATIVE VALUE OF ANTIPYRIN AND ANTIFEBRIN.

Dr. W. G. Barr, of Bridgeport, Illinois, has made a most careful clinical study of these remedies on himself whilst suffering from neurasthenia complicated with malaria. He thus sums up his experience in the *Therapeutic Gazette*. This table, he says, will suggest the relative use of the two drugs:

<i>Antipyrin.</i>	<i>Antifebrin.</i>
Lowers the temperature in half an hour.	In an hour or more.
Effects last two hours.	Effects last six hours.
More diaphoretic.	More diuretic.
Depressing after effects.	No after effects.
Cerebral sedative.	Cerebral, vaso-motor and muscular stimulant.
Dose 15 to 30 grains.	Dose 5 to 15 grains.
Tolerance from continued use.	Tolerance from continued use.

He further says, from the patient's point of view (which is nearly coincident with the physician), antifebrin is much to be preferred in continued fevers, because the dose is one small capsule, instead of

three, the effects lasting so long requires one-third the number of doses. The tonic stimulation excels the depression and after-malaise, and the cost is one-fourth that of antipyrin. The antipyretic action of antifebrin is as strong or stronger than antipyrin, and the only objection is its slowness of action. In insolation and other cases where a quickly-acting antipyretic is necessary, and when it has a specific action on the pathology of a disease, as is claimed in rheumatism, antipyrin is to be preferred. Whenever one can wait an hour for the antipyretic action to begin he greatly prefers antifebrin, and so he believes will the patient also. * He regards its stimulant or tonic effect as very valuable to weak patients.

I find in the *Medical Analectic* April 26th, 1888, an article from the pen of Dr. Elizabeth Stow Brown, on Acetanilide or Antifebrin, which is full of interest, and though it covers some points already mentioned, is worth producing here: "The introduction of acetanilide to the profession as a therapeutic agent took place in August, 1886. Drs. Cahn and Hepp, of Strausburg, then published their study of the substance, as in the case of antipyrin, it was the antithermic action which first attracted attention.

PHYSIOLOGICAL ACTION—NERVOUS SYSTEM.

Lepine, Dujardin-Beaumetz, Sunenberg, Charcot and Weill agree in the power of acetanilide to diminish the reflex excitability of the spinal cord. Weill observed, after administering to an animal, in doses of 25 to 50 centigrammes per kilogramme of weight of animal, general prostration with stupor; progressive but rapid lowering of the temperature; sensation at first diminishes, then lost, the animal sinking into a comatose condition, followed by spasmodic convulsions, and dying in from twenty-four to thirty-six hours after ingestion. It acts especially on the respiratory functions, which is markedly slow. According to Heinzelmann, deafness and mydesis have occasionally occurred with therapeutic doses.

Circulatory System.—The effect upon the heart, blood-vessels and blood is very prompt. The heart at first is slightly quickened, then slowed and strengthened. Prolonged use of the drug is said to produce fatty degeneration of the heart-muscle. (*Gaillard's Journal*, February, 1888.)

Acetanilide first stimulates the vaso-motor constrictor system, leading to increased arterial tension. This effect is soon followed

by dilatation of the cutaneous arterioles and perspiration immediately appears.

Acetanilide markedly diminishes oxyhæmoglobin of the blood, and methæmoglobin increases. This produces a state of internal asphyxia from the interference with the respiratory power of the blood. Cyanosis in this way is not unfrequently seen from the therapeutic doses, but is quickly recovered from.

Lepine says that the change of methæmoglobin back again to oxyhæmoglobin takes place rapidly. The methæmoglobinuria is entirely intra-corpuseular, and the drug exercises no destructive power upon the red blood cells.

Temperature.—Acetanilide has powers which would lead the observer to suspect an antithermic action. It dilates cutaneous blood-vessels and produces free perspiration, and it greatly retards the processes of disassimilation. This latter action presumably depends upon the interference with the respiratory power of the blood, but it is not as yet wholly explained. Evans (*Ther. Gaz.*, June 15, 1887), in an elaborate article illustrated with charts, gives the results of a pains-taking study of the antipyretic action of acetanilide. His conclusions are:

“1. That antifebrine effects a marked depression of normal bodily temperature.

“2. During the depressing action of the drug on normal temperature, it seems to cause a slight fall of arterial pressure. This is not constant.

“3. Although it influences so markedly normal bodily heat, it seems to possess little power against the pyrexia produced by the introduction of pepsin into the blood. Under these circumstances the administration of acetanilide causes rise of the hitherto depressed pressure, and also increase of the bodily heat. (This must depend on some organic change produced by the digestive ferment.)

“4. It reduces normal temperature by influencing both heat-production and heat dissipation.

“5. Acetanilide in fever reduces high temperature by decreasing heat production.”

Alimentary Tract.—Acetanilide has no influence on the digestive system.

Skin.—It is only very rarely that any eruption is produced. Cahn and Hepp have seen the appearance of the miliaria cysts and rubra.

As with antipyrin, the action of antifebrin is almost invariably accompanied by profuse perspiration, which often is the first physiological effect. Atropine does not counteract this sweating.

Urine.—The urine is greatly increased in amount, the direct result of the increased arterial tension (*Osler, Ther. Gaz.*, March, 1887). Cahn and Hepp recovered acetanilide in its own form from the urine.

Antiseptic Properties.—Cahn and Hepp think the drug has energetic antiseptic properties. This action is denied by Dujardin-Beaumetz, but affirmed by Lepine. The latter thinks that the antiseptic action is due to the aniline, which, being set free from combination, exerts its antifermentative power. This, however, is hardly in accord with what chemists claim to be the extreme stability of acetanilide.

Tissue Change.—Acetanilide not only retards tissue disintegration, but favors fatty metamorphosis.

THERAPEUTICAL ACTION.

As an *analgesic*, Dujardin-Beaumetz claims that acetanilide should be placed in the same group with antipyrin and phenol (*L'Abeille Méd.*). Démieville (*Rév. Méd. de la Suisse Romande*) reports 80 cases of all varieties of pain in which he used this drug successfully: the pains of neuralgias, of tabes dorsalis, headache, migraine, pains with or without nerve alteration. As an *hypnotic*, acetanilide has been found satisfactory. Dr. G. Dalton Hays (*N. Y. Med. Rec.*, December 17, 1887) observed an hypnotic action after its administration for headache, and proceeded to use the drug for pure insomnia. The results were good. Dr. Hays advises beginning with doses of 5 grains, and creeping up; and as the hypnotic action seems to be sometimes delayed, he gives the dose two hours before bedtime. As an *antispasmodic*, the drug has received little favor, though it has been tried to some extent in chorea and epilepsy. In acute alcoholism, Kell (*N. Y. Med. Rec.*, February 18, 1888) has found its results satisfactory. As an *antipyretic*, acetanilide has been proven effective against fevers of nearly all types. The temperature falls in about an hour, and remains lower for about six hours. Only rarely do rigors attend the subsequent rise. The drug is to be given in doses of from 4 to 10 grains. Experience has proved that the hyperpyrexias of phthisis and typhoid fever are

most easily affected (Fast.) In typhoid fever the results have been very good, and antifebrin has fulfilled well the indications for an antipyretic drug. In phthisis, acetanilide has been highly commended. Cauldwell (*N. Y. Med. Rec.*, April 16, 1887) concludes that it is the best drug to control the chill and fever of phthisis. It has rarely any unpleasant after-effects, though in many cases it produces sweating, and occasionally cyanosis occurs. It does not interfere with digestion, and can always be retained. It increases the urine and quiets the nervous system, producing a feeling of well-being in the patient. As an *anti-periodic*, acetanilide has shown no certain power. In *rheumatism* there is much evidence of its good effects as a symptom medicine to be used at the beginning of an attack of the acute articular form (*Jour. Ment. and Nerv. Dis.*, January, 1886, and Riese, Eisenhardt, Cahn and Hepp). In *dysmenorrhœa* and as a *uterine sedative*, acetanilide has been used successfully (Chouppe, *Br. Med. Jour.*, Dec. 17, 1887).

Comparative Action of Antipyrin and Acetanilide.—Acetanilide is effective in about half the dose of antipyrin, and costs one-half as much. The two drugs are about equal in their power to reduce temperature; but antifebrin is more certain than antipyrin, less liable to produce profuse sweat, tendency to collapse and to chill as the action passes off (*Gaillard's Journal*, March, 1887).

While antipyrin lowers the temperature in half an hour, its effect lasting two hours, antifebrin takes longer, one hour or more, and its effects last six hours. Antipyrin will be found more diaphoretic; antifebrin more diuretic (Barr, *Ther. Gaz.* June, 1887). In migraine both drugs are about equally successful. In epilepsy their efficacy is about equally doubtful; while as hypnotics antifebrin is preferable.

In hay-fever they are of about the same value. As analgesics, antifebrin is superior to antipyrin. The special advantages of antifebrin over antipyrin (Simpson, *N. Y. Med. Rec.*, December 3, 1887) are its easy administration, tastelessness, small dose, cheapness, its never producing nausea and vomiting, its pleasant effect on the system, and its diuretic effect.

There have been, however, warnings uttered against antifebrin. The *Lancet* of July 9, 1887, reports antifebrin as an "uncertain and, indeed, dangerous remedy"; that its action is uncertain, and that it is liable to produce violent sweats, prostration hemorrhage, or cyanosis. Moreover, while idiosyncrasy varies considerably, disease also exercises a

modifying influence, cases of erysipelas requiring larger than ordinary doses.

Germain Sée believes acetanilide valuable but difficult to manage from the profound effect upon the blood (*Comptes-Rendus de l'Acad. des Sciences*, April 18, 1887).

"Antifebrin" is a proprietary name, and is controlled by patents. Bought under this name it costs about thirty cents per ounce. But the name "acetanilide" cannot be controlled in any way; and under this name the substance can be obtained for fifteen cents per ounce. As it is one-eighth the price and one-half the dose of antipyrin, it is much more economical in use.—*Elizabeth Stow Brown, M.D.*

ANTIPYRIN AS A HÆMOSTATIC.

Dr. W. M. Powell, in *Daniel's Texas Medical Journal* (the full article is copied in the NORTH CAROLINA MEDICAL JOURNAL for April, 1888) says: "This drug was first introduced as antipyretic, but it seems to be a more valuable agent in other respects, at least it has given me better results. In fevers I regard it unreliable, because even in moderate doses it depresses the patient to such a degree of prostration that stimulants must necessarily be promptly given. As a local hæmostatic I can only briefly refer to two cases that came under my care recently:

Mrs. S. is the victim of "an old sore leg" of some three years standing, the sore situated on anterior surface, lower third of tibia. Sometime ago, while out in the dark drawing water, she accidentally struck the sore leg against the spout of a stove-kettle, which caused a frightful hemorrhage, filling her shoe full of blood in a very short time. I was sent for in haste, and when I arrived found her nearly exhausted. I applied a 4 per cent. solution of antipyrin, and had the satisfaction of seeing the bleeding quickly checked, no more hemorrhage occurring. A few days later I operated on a boy in his seventh year for phymosis, removing nearly one inch of the prepuce—the hemorrhage of course was profuse. Before removing the clamp forceps I applied a 4 per cent. solution of antipyrin also immediately after removing them. All bleeding was promptly arrested and the mucous membrane and foreskin were neatly brought together with numerous stitches without the least annoyance from further hemorrhage. A simple water dressing completed the operation, and on redressing the following day I do not think I ever saw a cleaner, nicer wound.

Dr. Coruti, in *Independencia Medica*, concludes as follows :

1. Antipyrin is a powerful hæmostatic.
2. It is superior to perchloride of iron, because it leaves the wound perfectly clean.
3. It is superior to ergotine, because it has no toxic effects, if the doses are not too enormous.
4. In most cases it is preferable on account of its double antipyretic and antiseptic action.
5. The hæmostatic action takes place in a very short time.

Antifebrin has been administered repeatedly by myself to nervous, hysterical women, who were continually requesting something to compose them, with the happiest effect, oftentimes supplanting the seemingly necessary hypodermic injections of morphia. A man about 55 years of age, broken in health, who has been in his younger days quite a rue, is a morphine habitué, and now a sufferer from sciatica, has often taken this drug at my suggestion, in lieu of morphia, with the happiest effects, giving him refreshing sleep, and with it the most delightful dreams, producing a priapism the like of which he has not experienced in many years before. Notwithstanding he has rather a buxom wife, twice in the past three weeks he has suffered the ignominy of a nocturnal emission. I have never before heard or read of acetanilide possessing aphrodisiac properties. To finally summarize :

Quinine

Is a tonic of marked effect, and its long-continued use in considerable daily doses, improves malarial anemia.

Quinine is antiseptic.

Antiperiodic.

Sedative only in doses so large that the stomach may not tolerate enough to produce the effect.

Produces deafness.

Is prophylactic against attacks of true malarial poisoning.

Reduces temperature in some forms of malarial fevers, but has little effect in typhoid fevers.

Antipyrin—Antifebrin.

There is good reason to believe that in long-continued use (four to six weeks) of these drugs or any of the analine products produce a decomposition of the coloring matter of the blood.—*Therapeutic Gazette*, October, 1887.

Antifebrin is not antiseptic, while antipyrin seems to be.

Not antiperiodic.

Analgesic.

Does not produce deafness.

Is not prophylactic against malaria.

Reduces temperature in all cases of fever.


Remarkable effects in migraine, and substituting morphia almost entirely.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C.,	} Editors.
GEO. GILLET T THOMAS, M. D., “	

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

JOHN MILNER FOTHERGILL, M.D., EDIN.

We deeply regret to have to announce the death of Dr. Milner Fothergill. Dr. Fothergill had for many years suffered from diabetes, of which the symptoms recently became much aggravated, and have now proved fatal, gangrene of the foot having set in, followed by fatal coma. Dr. Fothergill's career was in many respects a remarkable one. Without friends, without official position, and never having been elected a Fellow of his College, Dr. Fothergill nevertheless attained a position of considerable influence in medical literature, and was justly esteemed as an authority of no little weight in a great variety of diseases, especially those con-

nected with nutrition. His writings, which were numerous and voluminous, were vigorous in style, interesting in matter and original in thought. Though his strongly pronounced personal characteristics may have interfered in many respects with his success in life, they made him a very marked and interesting personality. He was by birth and characteristics a Westmoreland dalesman, witty, humorous, though somewhat unpolished in speech and rough in manner. A certain sense of personal grievance under which he labored during a large part of his life made him often unduly aggressive, and thus interfered in some degree with his social and professional advancement, but his power, vigor and genial humor brought him deservedly a very wide circle of friends who esteemed his independence of character and his intellectual power, and who will greatly regret his premature death.

John Milner Fothergill was born on April 11th, 1841, in the Westmoreland village of Morland, where his father was engaged in the practice of medicine. The Fothergills and his mother's family the Milners, were among the old "statesman" families of Ravens-tonedale on the Yorkshire border, and both have contributed notable men to medicine and the church; among these have been Dr. John Fothergill, F.R.S., a well-known London physician of the last century, and Dr. Anthony Fothergill, of Bath, who was not only a physician, but a poet, and whose name is perpetuated by the Fothergillian gold medal of the Medical Society of London. His mother's family had produced a Dean of Carlisle, Joseph Milner, the Church Historian, and the Rev. Richard Burn, D.D., best known as the author of Burn's Justice, which is, or used to be, the *vade mecum* of county magistrates.

Young Fothergill was himself destined at first for the Church, but his own inclination towards the medical profession was confirmed by the advancement of his father's cousin, Sir John Hall, to be Surgeon-General of the Forces in the Crimea. He was accordingly apprenticed to his father, who is described as a well-read, sound, common-sense country practitioner. When the period of apprenticeship was over, the son went to the Edinburgh Medical School, and in due course obtained the degree of M.D. from the Edinburgh University in 1865, as well as the licenses of the Royal Colleges of Surgeons and of Physicians. Somewhat against his inclination, he then returned to his native village to assist his father, whose health

was failing,, and spent the next four years in the hard work of a country practice. He made good use of his time, reading extensively, and maturing those habits of thought which afterwards brought him a wide reputation. In 1869 he obtained the post of senior resident medical officer of the Leeds Dispensary, and so well employed his opportunities that in 1870 he won the Hastings Gold Medal of the British Medical Association with an essay on "Digitalis; Its Mode of Action and Its Use." Encouraged by this success, he determined to make a special study of cardiac disease, and as a first step went to Vienna to work under Prof. Rokitansky in the Pathological Institute. He afterwards visited Berlin to attend the practice of Prof. Traube, and returned to England in 1872, with the manuscript of his first book, "The Heart and Its Diseases, with their Treatment," in his portmanteau. Even the first edition of this work was a remarkable book, and quickly gained a considerable circulation, being much helped by the easy and graphic style which the author already showed himself to possess; the subject was dealt with in a thoroughly practical way, and a prominence then unusual was given to the influence of Bright's disease and various nutritional vices on diseases of the heart. A second edition was issued in 1879; and few systematic works by an English physician not connected with a teaching school have been so widely read.

Dr. Fothergill settled in London in 1873, and became a member of the Royal College of Physicians; shortly afterwards he was elected Assistant Physician to the West London Hospital, a post which he held for ten years, and subsequently to the City of London Hospital for Diseases of the Chest; for some years before his death he had been full Physician to the last-named hospital. In 1876 he published "The Practitioner's Handbook of Treatment; or, The Principles of Therapeutics," which was very successful and materially extended his reputation, especially in America. For many years Dr. Fothergill wrote to the *Philadelphia Medical Times* a monthly letter, which was never dull, and was often not only interesting and amusing, but instructive. In this way his name became well-known on the other side of the Atlantic, and some of his most recent works have been written for American publishers. In 1875 he conducted some experiments on antagonism, for which he received a grant from the British Medical Association; and in 1878 he gained the Gold Medal founded by his paternal ancestor by an essay on

"The Antagonism of Therapeutic Agents and What it Teaches." From this date his attention was chiefly given to gout, dyspepsia and other allied diseased conditions, and several work have appeared, among the most ambitious of which are "Indigestion, Biliousness and Gout in its Protean Aspects, and "The Diseases of Sedentary and Advanced Life," which, if they provoked criticism, also stimulated thought. Milner Fothergill, however, by no means feared criticism; indeed, he seemed almost to enjoy the giving and receiving "swashing blows," the atmosphere of combat bringing out his best energies and stirring his North-country blood. In such wordy combats he had this advantage, that people always read what he wrote because of the racy style in which it was written. He had made a somewhat fanciful classification of persons who in this day suffer from gout and other nutritional diseases into the Norse and the Arab type, which is unfortunately little adapted to the cramped physical surroundings of city life. His strongly-marked character and many sterling qualities converted into friends the acquaintances who were attracted by his remarkable qualities as a *raconteur* and talker, and by them he will be long and deeply mourned.

He was married in 1880, and leaves a widow, but no children.—*British Medical Journal*.

The death of Dr. Fothergill came with peculiar sadness to the American profession, and like a cloud in a clear sky. We had just been regaled with a new book from his prolific brain, crisp and clear like all his writings, betokening a vigor which had not reached its zenith, when the news of his death was flashed beneath the ocean.

In such high esteem was Dr. Fothergill held, that we have had a cut made from an excellent photograph taken by Barraud & Gerard, of London, about 1880, knowing that his genial face would be welcome to all of our readers.

The name of Fothergill in this country has many pleasant associations. Dr. John Fothergill, a kinsman of Dr. Milner Fothergill, a distinguished physician and philanthropist (born 1712, died 1780), was associated in the last century with the investigation of the indigenous medical plants of America and other countries, and founded, at an expense which was then unknown in England, a botanical garden at Upton, in Essex. In his honor the younger Linnæus named an American plant, belonging to the Nat. Ord. Hamamelaceæ, Fothergill. This plant is one of the earliest to appear in the spring

in our "bays," and its pure white boll sends out a delicious fragrance, which we have always associated with the *bonhomme* of the younger Fothergill. To Americans he was always courteous and genial, and the English tribute we publish above might have added that he was not only "well known in America," but he was held in the highest rank of living medical writers. This may sound like excessive praise to Englishmen, but to Americans, we doubt not, it will be approved as eminently just.

The writer of this records with profound gratitude the kind words of encouragement sent to him when his horizon was apparently bounded by a painful death. Dr. Fothergill's opinion, based upon his recent experiences of similar cases, pointed out clearly the conditions upon which recovery could take place, and expressed his confidence in results which would follow a given treatment. Little did we dream that at the very time he was sending words of encouragement to a far off invalid that he was within the grasp of a remorseless giant.

The whole American profession mourns the extinguishment of this life, full of brilliant promise, so blessed in its benefaction to the world of science.

A PORTRAIT OF DR. CORNELIUS R. AGNEW.—We insert the following with pleasure: "At the last meeting of the Ophthalmological and Otological Section of the New York Academy of Medicine, the following motion was made and carried: 'That a committee be appointed, of which the Chairman of the Section, Dr. David Webster, be a member, whose duty it shall be to obtain a good photograph of the late Cornelius R. Agnew, for the purpose of having engravings suitable for framing made from this. The right of issue and sale of such engravings shall be given to some first-class publisher, if practicable; if not, the committee shall offer them to the profession at cost.'" In accordance with the above, a committee has been appointed. Members of the profession who desire such an engraving accompanied by an autograph signature, should send their names and addresses to the Secretary of the Committee, Dr. Charles H. May, 640, Madison Avenue, New York City, at once. When all such names shall have been recorded, those who have requested a copy of the engraving will be notified of the cost of the same, either by the publisher, or by the committee having the matter in charge.

MICROSCOPICAL.

WILL YOU NOT JOIN US, DOCTOR ?

In this number will be found the Constitution and By-Laws of the Medical Microscopical Society of North Carolina. This Society was organized at the last meeting of the Medical Society of North Carolina, held at Fayetteville. Most of the members are young men—almost all are beginners. Some twelve or fifteen at that time did not own a microscope. Those of the number who have had experience in this art will from this time forth write monthly articles for this JOURNAL giving the technique of such simple every-day examination as the practical physician will need. By carrying out the suggestions given in this way, any one can qualify himself for ordinary practical work. Now, Doctor, is the time to begin. You can get an outfit suitable for practical work for \$50. and cannot invest the same amount of money to more professional benefit.

Write to Dr. Robert S. Young, of Concord, our present Secretary, for the address of dealers in microscopes, etc. If you cannot make a selection, write to me and I will aid you as best I can. You will have an abundance of time to equip yourself before the August article, which will be on the subject of the Epithelial Tissues.

Respectfully yours,

PAUL B. BARRINGER, M.D.

NORTH CAROLINA PHARMACEUTICAL ASSOCIATION.—We have received through Mr. E. V. Zoeller a circular stating that the above Association would meet in Goldsborough, at 10 o'clock, A. M., Wednesday, August 8th. Let every druggist go and labor to lift pharmacy out of the atmosphere of the all-prevailing influences of illegitimate traffic.

ALEXANDER'S operation of shortening the round ligaments, it is now generally conceded, is not efficient in cases of prolapse, unless supplemented by the usual operations on the vagina and cervix.—*California Practitioner.*

REVIEWS AND BOOK NOTICES.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES: A Yearly Report of the Progress of the General Sanitary Sciences throughout the World. Edited by Charles E. Sajous, M.D., and Seventy Associate Editors, Assisted by over Two Hundred Corresponding Editors, Collaborators and Correspondents. Illustrated with Chromo-Lithographs, Engravings and Maps. F. A. Davis Publisher, Philadelphia and London, 1888.

This work has been so long on the way, and so much preliminary work had to be done, that until we got a good half hour from the wide-awake canvasser for it, we thought the enterprise had died "a bornin'." Instead of that we have now five handsome volumes, in the most beautiful typography, clearly and even handsomely illustrated, so that the elderly gentlemen can enjoy an hour or two with them every day or night without pausing to wipe their spectacles. One of our friends who picked up a volume was so struck with the richness of its contents and the vastness of the ground covered came to the conclusion that, with these volumes annually, we could do without medical journals, forgetting for the moment that they were the crystals of medical journal literature, the active principles with the supernatant liquor drawn off, and if there were no medical journals there could be no "Annual." By the way, the title of this work is a little awkward, and not very euphonious, and we will take the liberty of calling it "Sajous' Annual" for short.

Most of the condensations are clearly and skilfully done, but some of them are excellent. A few have somewhat the objectionable qualities of primary treatises, rather than a historic portrayal of events included within the dates covered by the Annual. The subjects upon which there will be perhaps the most active inquiry will be those of abdominal and brain surgery, and the reader will find that they are treated in a masterly way. Some of the practical suggestions upon these two subjects, are immensely important, and contain the pith of all the records, so that the general practitioner can claim the solid nuggets of gold which, until thus reduced by master minds, were of no use to him.

The article on the "Technology" of the microscope is particularly serviceable to the new Microscopical Society just formed in the

State, and it contains all the best that has been written. This is appropriately followed by an article on histology, both of them being by Dr. W. P. Manton, of Detroit.

The index is in three columns, extending over fifty-one pages. One column is "general index," the next "therapeutics," the third "authors quoted."

The advance along the whole line, as portrayed in these volumes, is remarkable, if not uniform, but this array only prepares us for what the next year will bring forth, and then many of the "truths" which we now dote on will be dead or fatally wounded.

A HOSPITAL FOR DURHAM—DR. CARR'S GENEROSITY.

We give below an extract from the *Tobacco Plant* action which has been taken in regard to the establishment of a Hospital in the thriving town of Durham. Dr. Carr's generosity is so characteristic of him, that we need hardly comment upon it, and just add that the other towns in our State might go and do likewise. Nothing speaks so loudly of a growing Christian civilization as the erection of hospitals :

"At the regular meeting of the County Medical Society, on Monday night, it was represented that the plan of inaugurating a hospital for Durham, proposed some months since, had been a failure, and that certain offers had recently been made looking to the opening of a hospital for the town. After some informal discussion, it was

"*Resolved*, That we, as the Durham County Medical Society, form a Hospital Association, and that each member be appointed to examine eligible sites for location and report at a called meeting Tuesday night.

"At the called meeting last night reports on different sites were received from Drs. Carr, Smith, Monroe, Manning and Roberts, and, after discussion of the policy which should govern us in locating, buying, building or renting, Dr. A. G. Carr offered *as a gift to the Society, so long as it should be used for hospital purposes, one lot of land, 2.38 acres, opposite the residence of Mr. W. H. Kerr, near the Wooden Mills, valued at \$1,000; or one lot of 5 acres, near*

Redmond's Grove, on the same terms, stipulating that a building costing \$3,000 should be placed on the first, or one worth \$10,000 on the second lot.

"The thanks of the Society were tendered Dr. Carr for this liberal offer, and each member of the Society was appointed a soliciting committee to raise funds for the erection of a suitable building.

"Drs. Monroe, Carr and Roberts were appointed a building committee. J. D. ROBERTS, Secretary."

Durham, Wednesday, July 18, 1888.

CONSTITUTION OF THE MEDICAL MICROSCOPICAL SOCIETY OF NORTH CAROLINA.

Article I.

This Society shall be called the Medical Microscopical Society of North Carolina.

Article II.

The object shall be to encourage microscopic research and to perfect its members in the use of the microscope.

Article III.

Application for membership may be made through any member (in good standing) at any regular meeting of the Society, the applicant becoming a member upon receiving a unanimous vote of the members present at such meeting and upon his signing the Constitution and paying One Dollar to the Treasurer.

Article IV.

Recognizing the Medical Society of North Carolina as the representative organization of the medical profession of the State, no physician of the State shall be eligible to membership in this Society whose qualifications are not such as to entitle him to membership in the said Medical Society of North Carolina.

Article V.

Any scientist or person of well-known skill with the microscope,

may be made an honorary member by the unanimous vote of the members present at any regular meeting; such members shall be entitled to all the privileges of the Society save that of holding office or voting at its meetings.

Article VI.

This Society shall hold its annual meeting on the evening of the second day of the annual meeting of the Medical Society of North Carolina, or on such other day of said meeting as the President may appoint.

Article VII.

At the annual meeting of this Society for each year there shall be elected the following officers, viz: A President, Secretary and Treasurer. The officers shall be elected by ballot; a majority of the votes cast shall be necessary for an election. The officers elected shall serve for one year or until their successors are elected. They shall enter upon their duties at the next regular meeting.

Article VIII.

This Constitution can be amended at any time by a two-thirds vote of the members present, notice having been given at a previous meeting of such intention to amend.

BY-LAWS.

Article I.

It shall be the duty of the President to preside at all meetings, to appoint the annual essayist, etc.

Article II.

The Vice-President shall perform these duties in the absence of the President.

Article III.

The Secretary shall keep a full and true record of the meetings, shall conduct the correspondence of the Society, notify members of their election and send out proper notices of meetings, etc.

Article IV.

The Secretary shall have charge of the cabinet of the Society and of all books, apparatus, etc. He shall number each slide as received, and thereby indicate its position in the cabinet. He shall also write a description of each slide in a descriptive book.

Article V.

The Treasurer shall have charge of all of the funds of the Society, and shall attend to the collections of all dues and contributions of members and others. He shall pay all bills against the Society, when so ordered by vote of the Society, approved by the President. He shall give a detailed report of the finances of the Society at each annual meeting.

Article VI.

The yearly dues of the Society shall be One Dollar, payable at every annual meeting. Should any member fail to pay his dues for two years his name shall be dropped from the roll of the Society. He may be restored to membership upon paying his arrears and receiving the unanimous vote of the members present at any annual meeting.

Article VII.

Five members shall constitute a quorum for the transaction of business at any meeting of the Society.

Article VIII.

The Order of Business of this Society shall be as follows :

- (1) Reading of minutes.
- (2) Reports of committees.
- (3) Miscellaneous business.
- (4) Election of members.
- (5) Reading of essay.
- (6) Discussion by members.
- (7) Appointments by the President.
- (8) Examination of slides presented to the Society.
- (9) Exploration and discussion of the same.
- (10) Adjournment.

POISONING FROM THE LOCAL USE OF COCAINE.

On July 3d Miss Ella Frost, a music teacher in our town, was taken with severe toothache, and soon consulted Dr. C. A. Rominger, a most excellent dentist, who placed in her tooth cavity a small piece of cotton upon which he put three drops of the 20 per cent. solution of muriate of cocaine. Soon afterwards she experienced complete relief of pain, and says she felt "very happy." The pain having been relieved entirely by the cocaine, she went home. Upon her arrival she said to the family that she felt tired and must go to bed. The family were persuaded that, from her appearance, there was something radically wrong, and sent immediately for me. When I arrived, which was in a few moments after she had taken her bed, I found her entirely unconscious, breathing very irregularly and only 12 to the minute, her pulse were 47 to the minute, pupil on the right side (side in which the cocaine was used) was very much dilated, tongue drawn to the left side, and the whole system in an extreme state of relaxation. She responded not at all to a pin which was stuck in her right arm, and all efforts to arouse her sensibility were in vain.

The history having been given me, I at once diagnosed *cocaine poisoning*. Not having seen many accounts of cocaine poisoning, I was at somewhat a loss as to what to do, and to some extent was fearful of the termination of the case. I remembered, however, having read only a short while ago in the *Therapeutic Gazette* of a case treated by whiskey, consequently I administered a large quantity of French brandy hypodermically and did not get any benefit. I then gave a large quantity by mouth, and not much good result, but I think some. My next idea was to administer strychnia hypodermically, which I did, using 1.100 grain, and in a few moments she began to rally, and in two hours was *completely* out from under its influence except a general relaxation, which I think the whiskey helped to produce.

I am satisfied that strychnia is the antidote to cocaine. I know that it was the prime factor in the restoration of this patient. It was a 20 per ct. solution used in this case, which is the strength generally used by dentists. The dentist in this case had used it many times and never had any bad results. I have myself used it many times. Only a

short while ago I used the same strength of solution in operation on cervix uteri and was charmed with it. So we may safely say it was idiosyncrasy in this case, but I think it should teach us that it is a dangerous remedy and should be used with extreme care.

There were peculiarities in this case—one was the slow, feeble pulse. I notice in *every* case that I have seen reported that the pulse have been quick and fast. I don't know why this was. If any one has had any experience with strychnine in the treatment of conditions of this kind, I should like to have them report it.

Very truly,

L. G. BROUGHTON.

Reidsville, N. C., July 18, 1888.

CASCARA SAGRADA IN RHEUMATISM.

By H. T. GOODWIN, M.D., Assistant Surgeon United States Marine Hospital Service.

The effect of Cascara Sagrada in rheumatism I discovered by accident. About three months ago I was with severe rheumatic pains in my shoulder, the slightest motion causing intense pain. The third day of the attack I commenced taking as a laxative ten drops of the Cascara, t. i. d. The first morning after taking it the pains were so much less severe that I could move my arm freely. The day following I was entirely free from all discomfort.

Although, as I have intimated, I had not taken the cascara with any idea of relieving the rheumatism, it occurred to me a few days later that possibly the sudden subsidence of pain might have been due to the drug. There being a few cases of rheumatism in the wards, I determined to try to verify my suspicions. Discontinuing the salicylates, iodides, etc., which these patients were taking, I substituted extract cascarae sagrada fl., i c. c., t. i. d. The result astonished me. Within twenty-four hours there was marked improvement in every case. One case is especially worthy of notice. The patient was a Swedish sailor who had been admitted three months previously. He suffered intensely, and, although almost everything had been given from which relief might be expected, his suffering

was not allayed. For a day or two after admission he improved on large doses of salicylate of sodium, but subsequently the pains returned as badly as ever, and the salicylate had no further beneficial effect. Iodide of potassium was given several different times, but, owing to an idiosyncrasy, could be continued only two days at a time, a profuse rash making its appearance over the patient's entire body, the pains remaining as acute as ever. They were not confined to any two or three joints, but felt in all, being more severe, however, in the wrists, finger-joints and ankles, all of which sometimes became œdematous. On the evening of February 5th I commenced the exhibition of fifteen-drop doses of Cascara Sagrada three times daily. The following morning he was about the same; the second day he was much better; on the seventh he was so far recovered that he asked and obtained permission to walk out. From this on he continued to improve steadily, and on the 17th of February was discharged recovered.

I have since used the Cascara in fully thirty cases, some ten of which were in out-patients, and, with the exception of three or four in which there was a syphilitic taint, I have obtained the most satisfactory results. I commenced with 1 c. c., t. i. d., and have so far never had to increase it beyond 1. 5 c. c., and even to this extent in but two cases. I have seldom had to wait beyond twenty-four hours for beneficial effects. In two cases I had to stop it temporarily, owing to its opening the bowels too freely. In such cases I would suggest that one of the preparations of iron be given (separately) at the same time. I usually combine it with syrup or glycerin in equal parts, and instruct the patient to take from thirty to forty drops in water. In one case in which neither it nor the salicylate of sodium appeared to give much benefit, I combined the two with good effect. It is but seldom the bowels are opened too freely by it, the cases above referred to being the only ones I have so far observed.

Among the out-patients upon whom I have used it were two intelligent officers of vessels. One was an old river pilot, who had periodically suffered intensely for years. I gave him equal parts of the Cascara and syrup, of which I instructed him to take 2 c. c., t. i. d., and requested him to see me again in three days. He returned a month later, and then only to get the medicine renewed. He reported that he had never before had anything to relieve him so

quickly. The pains began to abate within twenty-four hours after taking the first dose, and in three days after left him entirely. He had no return, but, for fear of another attack, had come to ask for a bottle to keep with him.

The second case was that of Mr. R., first clerk on a large river steamer. He was suffering so much with pain in the hip-joint and thigh, that he could scarcely get to the office. I put him on large doses of salicylate of sodium, with colchicum and iodide of potassium, and instructed him to return in a day or two. In a week he sent a friend to say that the pain, instead of lessening, was so severe that he could not get to the office. The salicylate, etc., were stopped and he was given Cascara syrup, thirty-five drops, t. i. d. This was on Friday afternoon. On Sunday he came to the hospital and reported that he had commenced taking the second prescription Saturday morning, and that on Sunday he had felt decidedly better. He was ordered to continue the drops and report on Wednesday. Tuesday he sent word that he should be unable to report, as he was sufficiently recovered to resume his usual place on the steamer.

I am not able to explain the action of the drug in relieving rheumatism; I leave that to other observers. I write this in the hope of inducing other medical men to use the Cascara, report their experience and indicate, more particularly, in what class of cases they have found it of most benefit.—*New York Medical Journal*.

MR. DEPEW ON THE DOCTOR.

* * * "But when the cheerful and hopeful physician enters the room he brings in comfort and health. The sufferer knows that this man is able and skilful, that his brain and heart are full of the case, that his sympathies follow his efforts and *the potentiality of his powders is intensified by the inspiring magnetism of his personality.*" * * * "The rush and worry, the wear and tear, the rapid pace of our American life, irritate our nerves and render us peculiarly sensitive to impressions. The personality of the doctor, his disposition, his habits and his character form a large part of his success or failure. The vain and pompous doctor, who thinks so much of himself that he fails to appreciate the weakness and

watchfulness of the sick, leaves behind him a sense of neglect and indifference which neutralizes his medicine. The discursive and argumentative doctor airs his opinions on politics or theology to aching bones and fevered brains until only weakness keeps the outraged victim from murder. The grossest injury to the helpless patient, absorbing with every breath the spirit of her environment, is the polluting presence of the doctor saturated with whiskey or tobacco."

With regard to the success of the doctor's life, Mr. Depew also says some wise things :

"I have no faith in mottoes, or maxims, or rule for success, and, though often asked, never have any to give. A young man who has good health and governs his conduct by a conscientious answer to the ever-present question, Would my mother approve? and gives tireless attention to his business, is certain to succeed. It is impossible for every one to win fame or fortune, or both; but the man who earns a living, even in a very modest way, feels the inspiration of independence, and has safely passed the precipice of failure. Repinings for riches and angry envy of prosperity weaken the moral tone and mental fibre. They paralyze effort and end in empty vaporings in the bar-room and empty larders at home. The opportunities for accumulating large fortunes rarely come to members of the liberal professions. Their compensations are in the position and influence accorded to their culture and training. With them self-support is success, and when the surplus surely comes, and with it home, larger comforts, and fair competence for declining years, they enjoy a measure of happiness and content rarely found with the use and care of great wealth."

We feel sure that Mr. Depew would have made a good and successful doctor if he had not chosen a narrower field of usefulness in attending to the sordid details of railroad transportation.—*Medical Record.*

SUBSCRIPTIONS ARE NECESSARY.—An exchange relates this parable: "A revivalist requested all in the congregation who paid their debts to rise. The rising was general. After they had taken their seats a call was made for those who did not pay their debts, when one solitary man arose and explained that he was an editor and could not pay because all the rest of the congregation were owing him their subscription to his paper."

A TRAINING SCHOOL FOR THE DEFECTIVE AND THE FEEBLE-MINDED.

Our attention has been called by a member of the North Carolina Board of Health to an article in the *Washington Gazette* giving some account of the good work done in an institution for the Defective and Feeble-minded, and suggesting that such an establishment should be founded in our State. We think it is a movement well worthy to be considered, and we trust that the benevolent lady who has inaugurated it will meet with hearty support and liberal contributions of money. We know of an establishment of the kind founded in New York by Dr. Seguin the elder, and maintained by private support, and we know that Dr. Seguin worked out many of the difficult problems of training the hand of the idiot children. There may not be many children in our State needing such training, but we would like to know definitely how the matter stands, and with this intent the Secretary of the State Board has set on foot an inquiry as to the number of these children, and asks that all physicians and other citizens interested in the matter will aid the Superintendents of Health of their respective counties in making the enumeration.

If one School can provide for all in the State, then the plan seems feasible to establish an institution at a somewhat central point, but away from the larger towns. The State ought willingly appropriate \$100,000 for the purpose.

DEATH OF DR. A. Y. P. GARNETT.—Dr. A. Y. P. Garnett, the well-known physician of Washington, who died at Rehoboth Beach, Del., Wednesday night, was born in Essex, Va., in 1820, and was graduated at the University of Pennsylvania in 1841. He entered the navy as assistant surgeon the same year, was promoted surgeon in 1848, and resigned in 1850 to accept the professorship of clinical medicine in the National Medical College at Washington. He married the eldest daughter of Henry A. Wise. He was surgeon in the Confederate Army, and was the family physician of President Jefferson Davis and of all his cabinet officers. After the war he returned to Washington and was chosen to his old chair in the National Medical College. Recently he was elected President of the American Medical Association. He was a man of great independence of character, of courtly manners, of commanding presence, and pursued his profession successfully as the peer of any in a city whose profession is renowned for scholars and gentlemen.

READING NOTICES.

Dr. S. CURTICE, South Charlestown, O., writes : "Lactated Food has come to stay. I never begin to treat a fever patient or one of weak digestion without it."

I PRESCRIBE SUCCUS ALTERANS almost daily. This is, I believe, the best proof I can give of my opinion of its merits in the treatment of those cases requiring alteratives and tonics. It is undoubtedly a pharmacological remedy of great merit, well worthy of the prominence it has taken. M. L. AMICK, M.D., Cincinnati, O.

THE NEW YORK POLYCLINIC HOSPITAL.—The Faculty of the New York Polyclinic have decided to increase the clinical facilities of this Institution by establishing a spacious Hospital immediately connected with the College Building. We will be opened for the reception of patients in October next.

"THE conditions formulated by the Committee on Infants' Foods at the American Medical Association are approximated more nearly by Carnick's Food than by any other with which we are familiar." Editorial note in Philadelphia *Medical Times* June 1, 1888.

Sincerely yours,

REED & CARNICK.

WM. R. WARNER & Co. have issued the following notice to physicians : "We take this method of denouncing the circulation of certain erroneous reports as being the outcome of ignorance or malice. We have no connection with the firm of H. H. Warner & Co., of Rochester, who make "Safe Remedies" and other patent medicines. Our advertising is to the Medical Profession and our Pills and products (Warner's & Co's) have been used and held in high esteem by the most eminent doctors during the past thirty years in the United States and in foreign countries. The therapeutic value of a remedy is ascertained by the medical practitioner, and it is the province of the manufacturing chemist to prepare the various medicinal preparations in the most correct, comparable, palatable and convenient manner, by the aid of skill acquired by years of practice and experience. It seems to be necessary to specify Wm. R. Warner & Co's Pills and Bromo Soda with Caffeine to obtain what you want."

NORTH CAROLINA MEDICAL JOURNAL.

THOMAS F. WOOD, M. D.,
GEO. GILLET THOMAS, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

(1) JAGGED BULLET IN EXTERNAL MEATUS—(2) GUNSHOT WOUND OF ABDOMEN—(3) RADICAL CURE OF INGUINAL HERNIA.

By C. T. PECKHAM, M.D., Passed Assistant Surgeon United States Marine Hospital Service, Memphis.

CASE 1—Jagged bullet in external meatus.

William Diggs, colored, aged 34, native of Tennessee, admitted to hospital August 22d, 1887.

One year previous to admission, in an altercation, another darkey had fired at him at close range. Ball entered at the left angle of the mouth, was deflected by the teeth, passed beneath the tragus, and impinged on the mastoid process of the temporal bone. Since then he has had a continual discharge of pure pus from the external meatus. At times he suffered a great deal of pain.

The bullet was removed with bone-cutting forceps having gouge-

blades. Bullet weighed two drachms. In this case the interesting feature to me was the fact that he could hear a low-ticking watch at ten inches after the bullet had been removed.

CASE 2—*Gunshot wound of abdomen.*

Sunday, August 28th, 1887, about 6 P. M., William Howe was admitted to hospital. He was 28 years of age, colored, native of Mississippi.

Just before midnight of the 27th he got into a quarrel with another darkey. The darkey, while standing within a few feet of him, fired a 38 calibre ball at him. The ball entered the abdomen about four inches below the nipple and three and one-half inches from the median line. His comrades said he had vomited a great deal of blood and had passed much blood by the bowels. When admitted there were no signs of collapse. He was weak, pulse 120, regular, but not full. He had the hue which is peculiar to his race when much blood has been lost. His finger's ends were wrinkled like those of a laundress. There was local tenderness only. I concluded that the ball had passed through both walls of the stomach and was imbedded in the muscles of the back.

Enemata of milk were given every four hours. Only small bits of ice were given by mouth. The pulse diminished in frequency and increased in fullness. There was no pain nor tenderness in abdomen except around the entrance of the bullet. For two or three days the stools were thin and black. There were no clots in the stools.

On the sixth day, of milk and lime-water, in equal parts, a teaspoonful was given every quarter of an hour, to be discontinued if any pain or discomfort was felt in the stomach, to be increased every fourth hour by one teaspoonful if no disagreeable sensations are felt in the stomach. On the seventh day a tablespoonful of milk every half hour was ordered. On the eighth day two ounces of milk every four hours. On the ninth day four ounces of milk every four hours were ordered and the milk enemata were discontinued. On the tenth day bread was added to the diet. Eleventh day broth added to milk and bread. Twelfth day a small piece of tender roast-beef. Thirteenth day he was put on ordinary diet.

From the admission to his discharge there was no symptom of peritonitis except locally at the point of entrance of the bullet.

Why did I not operate? I did not operate for these reasons: The wound was received six hours after taking food; the stomach would therefore be empty, and foreign matter would probably not escape from the stomach into the peritoneal cavity; there were no symptoms to show that the hæmorrhage was still taking place. At the time of admission nothing could be gained by operating. I had everything made ready, so that if any operation became necessary it could be begun at once. The temperature was never more than one degree above normal, and that was on the third day. The patient was discharged September 14th, at his own request. I saw him two months later. He was then in good health.

April 26th, 1888, William Hunt was again admitted. He stated that he had been well from the date of his discharge until Christmas. Then he went on a spree and had been growing worse ever since. Has severe pains in his back after shooting down his right leg. Feels dizzy when he stands up. Poor appetite. Fair pulse and normal temperature. Bullet could not be located. The pain was relieved

May 6th, he ate his dinner, walked the length of the ward twice, went to bed, and in a few minutes was dead. At the post-mortem there was found a large blood-clot completely filling the left pleural cavity. The bullet was found imbedded in the body of the ninth dorsal vertebra. The body of the ninth and part of the body of the eighth dorsal vertebræ were eroded and carious. Death had been caused by the rupture of an aneurism which had been formed from an intercostal artery close to the aorta. The left lung at its base had formed a part of the aneurismal sac. It could be seen that the lung had yielded, as different parts of the lung tissue had become involved in this effort of nature to stay Death from his victim. The bullet in its path had cut the œsophagus. The bullet passed first into the pleural cavity, twice perforated the diaphragm, cut the œsophagus and passed to the left of the aorta and lodged in the ninth dorsal vertebra.

Charles Vilson, aged 40 years, was sent from Savannah, Ga., to Wilmington, N. C. He had been suffering with an inguinal hernia one year. It was caused by lifting. He could not wear a truss on account of the pain caused by the pressure. An operation for the radical cure was proposed. He consented to have it performed. February 12th, 1887, in the presence of, and assisted by, Drs. W. G. and G. G. Thomas, Bellamy and Lane, I performed what Gross in

his Surgery calls the direct method. The sac being small, I returned it to the abdomen. The edges of the pillars of the ring were freshened and brought together by three silver wire sutures which had been dipped in strong nitric acid and transferred to alcohol. These were left in place and the wound closed, with a drainage-tube inserted. Union was obtained by first intention except where the drainage-tube was. This opening closed rapidly when the tube was removed. A graduated compress was placed over the external and internal rings and held in place by a bandage. He was discharged cured, but wearing a truss. He was told to wear the truss for two or or three months till the tissues had become hardened.

Assistant Surgeon Vaughn wrote me in May from Preston that the operation was a success. The patient was in hospital in May for treatment for diarrhoea. The interesting feature is that he still has the three silver wire sutures in his body holding the pillars in apposition.

Passed Assistant Surgeon S. D. Brooks wrote me under date of July 12th that he had examined the above case several times and the operation was a complete success.

BRIEGER, as the result of experimentation on lower animals, concludes that typhoid bacilli secrete a ptomaine which he has called typhotoxine, and that the disease can be prevented by inoculating with this substance.—*California Practitioner*.

LIABILITY OF DRUGGISTS FOR CLERKS' MISTAKES.—The Supreme Court of Ohio has recently reiterated the general rule of the liability of druggists for negligence in putting up medicines. In this case the druggist clerk, when asked for "oil of sweet almonds," carelessly gave the "oil of bitter almonds," and the plaintiff's wife died almost immediately after taking the poison. There was nothing on the bottle to indicate that it was a virulent poison, and it was clear in the evidence that there was gross negligence on the part of the clerk. The druggist denied his personal liability for his clerk's mistake, but at the trial the court decided against him, and the Supreme Court affirmed the decision. This ruling is fully in accord with that of the courts of other States, and probably no tribunal would relieve a druggist under similar circumstances.—*Medical Times*.

CORRESPONDENCE.

NEW YORK POST-GRADUATE SCHOOL—DR. D. B. ST. JOHN ROOSA ON DISEASES OF THE MIDDLE EAR—NEW YORK GYNECOLOGISTS—SPAYING—DR. W. A. HAMMOND AND THE QUACKS; CEREBRAL ANÆMIA AND HYPERÆMIA DIFFERENTIATED; LARGE DOSES OF BROMIDE; SCIATICA; THE BRAINS OF SPENCER AND NEWTON AND THEIR PHILOSOPHY; MORE ITEMS ABOUT DR. HAMMOND—THE VARIETY OF SURGICAL WORK IN ONE DAY AT THE POST-GRADUATE SCHOOL—DR. MAX SCHEDE OF HAMBURG—REACTION IN NEW YORK IN FAVOR OF CHLOROFORM—BERLIN THE PLACE TO SECURE A SURFEIT OF SURGERY—THE CASE OF THE LATE EMPEROR FREDERICK FROM A GERMAN POINT OF VIEW.

BERLIN, GERMANY, July 14, 1888.

Messrs. Editors North Carolina Medical Journal:

DEAR SIRS :—For nearly four months past I have had the pleasure of listening to the lectures and studying the methods in their various lines of work of some of the greatest medical men of the present time, both in America and Europe. I hope that a cursory sketch of my experience up to the present date may be of interest to some of your readers, and especially to those who may be contemplating a somewhat similar course to the one I have pursued.

I am convinced that in some respects the course at the Post-Graduate Medical School and Hospital in New York is equal to any in Europe, and is especially adapted to the wants of the busy practitioner, who has but a few months to spare from his work at home in which to acquaint himself with the most recent improvements in medical science. Let me say in this connection, however, that if any one thinks a post-graduate course in New York partakes in any way of the nature of rest from work, that person is laboring under a gross delusion, and the sooner the idea is banished the better. I can conscientiously say that the hardest two months work I ever did, not excepting those immediately preceding my college exami-

nation, was done in New York the past spring, for, in addition to twenty-four lessons a week in the special eye and ear department, I followed, as far as possible, the course in general medicine and surgery. I mention this because it is usual for the physicians who attend this school to follow a somewhat similar plan, taking, in addition to the general ticket, work in some special branch, and this, it seems to me, is the most profitable course to pursue. I cannot too highly commend the facilities offered to the profession in this Institution for the study of the diseases of the eye and ear. Both the Manhattan and the New York Eye and Ear Hospitals are open to the matriculates, and, in addition to observing the methods of examination and treatment at the large clinics held daily at these institutions, the members of the special classes are, after a certain time, allowed to treat the patients themselves and to prescribe glasses, subject, of course, to criticism and modification by the surgeons in charge, who are always ready to explain fully the reasons for any changes made.

Dr. D. B. St. John Roosa is the leading spirit in this branch of work, as he is, in fact, of the Post Graduate School. No one who knows Dr. Roosa will doubt that he is a very level-headed man as well as a specialist of well-deserved fame. I doubt if there is living a higher authority in aural surgery, and in ophthalmic work he has no superior. Said Dr. Roosa to the class, recently, "With a running ear one's life is constantly in danger, yet some doctors say, 'Let it run.' If the same attention were paid to middle ear diseases as to gynecology more lives would be saved." In view of the drift which gynecology is taking in America at present, at least in New York, this remark seemed especially appropriate. In New York a gynecologist might be defined as a man who spays a woman at least once a week. The question of the condition of the ovaries seems to sink into insignificance when considered with that of the spayers' record of operations. It made my blood run cold to see how relentlessly the destruction of these organs which make woman woman, was practiced daily in that city, which in times past has done so much to make gynecology a science. At another time Dr. Roosa advised us to let germs alone and learn how to cure trachoma.

Dr. W. A. Hammond's lecture-room was always crowded and his clinics unusually large, interesting and instructive. Whatever else may be said about Hammond, it cannot be denied that he is a man

of profound learning and a quick insight into the nature of disease, and I may add that he is, in many senses of the word, a most magnetic man. We were very much interested by an account he gave us of a young clergyman in New York who was very greatly concerned about his health and who wrote the Doctor a letter describing minutely the symptoms of his frightful malady, which were that his left testicle hung lower than the right; that there was a sediment in his urine after it had stood for sometime; and, worst of all, that after erection there was moisture at the meatus, and that night he would have an involuntary seminal emission. He had been in the hands of a quack and was consequently in the gall of bitterness. The Doctor assured him that the "symptoms" he described were purely physiological, and advised him to marry. In a few months he received another letter telling him that he had married and that his wife was pregnant.

The Doctor assured us, with a twinkle in his eye, that he was a very modest man and only told us such things because he considered it very important for regular practitioners to occupy the field now held by quacks, and by treating such matters in a rational way to drive this army of charlatans from existence. He had just then returned from the court house, he said, where he had heard a sentence of \$200 fine and twelve months imprisonment pronounced upon a quack for using a recommendation with his (Hammond's) name to it in advertising some nostrum, and told us that he would have another one soon—Scott's Electric Belt man—for saying that he advised the use of his belts.

Dr. Hammond told us of a patient whom he recently had under treatment in the person of a distinguished divine in New York, who, during his sermons, would persist in exclaiming, "Go it boots!" When his attention was called to this eccentricity he immediately placed himself under treatment, and, after a period rest, was restored to his normal mental equilibrium. Dr. Hammond is a great sufferer from hay-fever, and told me that he had taken 20 grains of cocaine muriate daily until 600 grains had been taken, and had submitted to ninety-four consecutive daily galvano-cauteries of the nasal mucous membrane.

In an article published sometime since in *Gaillard's Medical Journal*, Dr. Corning, of New York, maintained that it was impossible for one to diagnose cerebral anæmia from cerebral

hyperæmia except by noting the effects of different drugs on the symptoms present in a given case. Dr. Hammond, however, says that the diagnosis is perfectly simple by one, and only one, symptom. If the patient has anæmia, he sleeps much more than usual, and if hyperæmia be present, wakefulness is always one of the most prominent symptoms. At another time he said that melancholia and insomnia usually, perhaps in all cases except uric acid poisoning, were relieved by the bromides, and that this was a new idea in medicine. In the uric acid diathesis Buffalo Lithia Water is his favorite treatment. He uses enormous doses of the bromides in many diseases, and in some cases of epilepsy gives as much as 100 grains t. i. d. One apothecary refused to fill one of the latter prescriptions, but the Doctor said he would never have the chance to fill another one of his.

In discussing Remorse, Hammond remarked that it was usually said to be the most intense kind of suffering, but that the German philosopher Heina said it was not as bad as the tooth-ache; as he had never experienced the former, said the Doctor, he could not settle the point.

For sciatica Hammond advises the following: Morph. sulph. gr. v. aquæ 3 j.; inject two drops *into* the sciatic nerve and systematically increase the dose. On one occasion I asked the Doctor if it were so, as had been reported, that he considered Herbert Spencer the biggest brained man living. He replied that he did not recollect ever having said so, but that he would say this now: "I do not believe he has a remarkably big brain—not so large, I should say, as that of the man I had before the class just now, but his brain is of the very finest quality and his intellect immense. Darwin had a much bigger brain than Spencer's and was perhaps a greater man. Newton was, I think, the greatest intellect the world has ever seen. I have read everything that Spencer has ever written, so far as I know, and think with Dr. O'Hagan that his system of philosophy will revolutionize the intellectual tendency of the age within a few years—there is no doubt about it. Huxley and Tyndall are great men, of course, and stand at the very head in their respective fields of science, but no other man that I know of has Spencer's great power of consecutive abstract reasoning. I am in hearty accord with him in believing it impossible for the human mind to accept as true a proposition of which it can have no conception, and I also

believe that the only rational attitude for one to assume toward the thousand-and-one questions which have puzzled the theologians and scientists since the world began is one of agnosticism."

Dr. Hammond has sold his elegant New York residence to Mr. Channey Depew for \$125,000, and will soon move to Washington, where he will establish a hospital for the treatment of nervous diseases. They tell some hard things on the Doctor in New York. One of his colleagues told me of a patient of his who had consulted Hammond recently in regard to some nervous trouble. While the Doctor was examining the interior of his eye with the ophthalmoscope he remarked to the patient that he was quite deaf in his left ear. "No," said the patient, "I have perfect hearing in both ears." "You are quite mistaken," said Hammond, "and I will convince you that you have no hearing whatever in your left ear." He then pressed his watch to the patient's ear and went through the other usual tests, satisfying the poor fellow that he was quite deaf in that ear. In short, he had *hypnotized* him. "Now," said the Doctor, "I will blow some powders into your nose and you will be all right." This he did, and greatly to his joy the patient heard as well as ever.

Before "Lal" had yet been given to the literary world Hammond remarked to Dr. Roosa one day that he was writing a novel, "That is nothing new," replied the latter, "you have been writing novels all your life."

Recently a distinguished New York surgeon, and the author of a standard work, was giving a clinical lecture upon the various symptoms in a case of congenital syphilis. "In this patient," said he, "we have exhibited the characteristic features of Hutchinson's teeth." Just at this inopportune moment the patient sneezed quite violently and out came a full set of false teeth. Dr. Roosa speaks of Hutchinson's teeth as cases where the fathers ate sour grapes and the children's teeth are set on edge.

I might go on and fill a whole JOURNAL with the sayings and doings of the New York doctors; I might tell you why Dr. Porter says never remove tuberculous glands of the neck surgically, and how Dr. Morris removed them every day; I might tell you why Dr. Satterthwaite thinks pneumonia in the negro frequently goes into phthisis, and in the white person never; why Dr. Fox thinks a prescription of oxide of zinc, ten parts, and oil of cade, one part, is the best treatment for chronic, non-weeping eczema; why Dr. Abbe

thinks the whole history of surgery must be written over since the introduction of antiseptics, and that the teaching of even one year ago will not hold good to-day; and lastly, I could tell you how the gynæcologists diagnose throat disease by use of the speculum and the laryngologists uterine diseases with the laryngoscope; but I fear I would weary your readers before I have said anything about the German doctors and so will close this part of my letter by giving an example of the surgery one has an opportunity of seeing at the Post-Graduate in one day. The following operations were performed and cases exhibited the last day of my stay at this school :

Prof. A. M. Phelps, 2 cases of hip-joint disease with wire cuirasses; 1 case of same with extension; 2 Pott's disease with plaster jackets; 3 double osteotomies for bow-legs; 2 tubercular disease of knee-joint; 2 talipes valgus; 1 varo-equinus; 1 talipes varo-equinus in infant; 1 ankylosis of wrist.

Prof. D. B. St. John Roosa, 1 enucleation of eye; 1 cataract extraction; 1 operation for squint; 1 plastic lid operation.

Prof. W. T. Bull, radical operation for cure for hernia; injection of cyst of neck; incision of psoas abscess.

Dr. Charles McBurney, lateral lithotomy; removal of carcinoma of breast; removal of fibr-sarcoma of superior maxillary; operation for non-union after excision of knee-joint.

Prof. L. S. Pilcher, removal of granulation tumor of arm; circumcision paraphymosis; amputation of nose for sarcoma.

Prof. Hanks, sarcoma of breast.

Dr. Lloyd, lacerated cervix and perineum restored.

Dr. Phillips, removal of adenoid vegetation of pharynx.

DR. MAX SCHEDE OF HAMBURG.

The world-wide fame of Dr. Max Schede as a surgeon attracts quite a number of Americans interested in that branch of practice to Hamburg. The General Hospital of that city contains twenty-six hundred beds, and as the number is insufficient for the demand, nine hundred more will soon be ordered.

There is no regular medical school in Hamburg, strange to say, and visiting physicians are only admitted to the operations and wards through the courtesy of the surgeon in charge. It was through the influence of my friend and travelling companion Dr. Phelps, of New York, who had spent eight months in this Hospital—where he

is very highly regarded—that I was admitted to the privileges of the wards and operating-rooms. And a privilege it was, indeed, for by many surgeons of note Dr. Schede is considered the best operator in Europe. Such is the opinion of Dr. Phelps and of Dr. Parks of Chicago, whom I had the pleasure of meeting here a short while since. I am sure the twenty-five North Carolina doctors who attended the International Medical Congress last September, will remember Dr. Park's classical paper on intestinal surgery with great interest. During the two weeks spent in the Hamburg Hospital I think I learned more about surgery than I had ever learned previous to that time. We saw from five to ten capital operations and numerous ones of minor importance performed daily, and also had the privilege of watching their after-treatment in the wards. In quite a number of cases it seemed to me that the patients must inevitably die upon the table or from shock soon afterwards, especially so in a case of removal by Dr. Schede of whole of left superior maxilla for fibro-sarcoma in a woman of 70 years of age, and again, when he amputated the thigh of a young woman at the hip for a sarcomatous growth of inguino-femoral region, involving the deeper vessels and necessitating the ligation of the external iliac, I asked Dr. Lowenstein, the chief assistant, if he expected these patients to recover from the effects of the operation. "Why, certainly," he laughingly replied; "Dr. Schede has found that the human body can stand a great deal." And they did recover, or at least were doing well when we left Hamburg, and so were all the other surgical cases which we had seen treated there. I never met a more quiet, unostentatious surgeon than Dr. Schede. He never seems to be in a hurry in operating, and yet he accomplishes a great deal in a remarkably short space of time. The calmness and self-possession with which he goes about a bloody capital operation and the dare with which he meets every emergency is gratifying to behold. He prides himself upon not being a *professor*, and therefore does not hesitate to consult before beginning a serious operation a book of anatomical chromo-lithographs, which always lies on the desk in his operating-room. Not the least of the factors which go to make up the brilliant record of the Hamburg Hospital is the thorough aseptic and antiseptic rules which are religiously observed from alpha to omega in every case. Schede certainly believes, with Dr. Tiffany, of Baltimore, that "the first thing to do in operating

is to clean yourself, and the next to clean your patient"; or, as Dr. Roosa more poetically puts it, "Only he that hath clean hands should wield the surgeon's knife." Then the intelligent after-treatment and nursing in this, as in every other well-regulated hospital, are features which are recorded as of paramount importance, and which, I fear, are too often disregarded by the average surgeon. I once witnessed the removal of an immense multilocular cystic tumor of an ovary by a surgeon of some repute where the assistants were rough farm hands and were dressed in their ordinary working clothes. The after-treatment was left to be carried out by the ignorant parents of the young woman. It would be superfluous for me to state the result of the case, or to formulate a moral therefrom.

There is a very decided revulsion on the part of the profession in New York in favor of the use of chloroform, and one which, as a Southerner, is gratified me to see. It is hardly necessary for me to say that in Germany it is used almost exclusively. Dr. Schede told us, however, with a certain degree of suppressed merriment, of an attempt made in the Hamburg Hospital by one of New York's most distinguished surgeons to convince him that ether was the proper thing, and that the reason it had not been adopted by the European surgeons was that they had not learned how to administer it. A patient was placed upon the table and Dr. ———, by way of demonstration, began the administration of ether *ex consuetudine*. Pretty soon Dr. Schede remarked to the anesthetizer that the patient's face was very blue and his breathing bad. "O, we never mind that," was the reply, "it is quite usual." In a moment more the patient was dead; and chloroform remains the favorite anæsthetic at the Hamburg Hospital to this day. It is rather startling to one who is at all conversant with the contemporaneous literature on the subject of anæsthetics to find the following statements made in Dr. Wyeth's recent work on surgery, which in most respects is such an excellent volume: "In general there is no comparison between these two agents" (chloroform and ether). "Ether is so much safer than chloroform that the latter is fast disappearing from practice. In the present rapid progress of science it cannot but be a short while until chloroform will be employed in a very limited number of cases. All the objections to ether * * * fade into insignificance when brought face to face with the fact that about seven lives are sacrificed by chloroform to one by ether."

Dr. Unna, the dermatologist, who was so much lionized in Washington last September, lives in Hamburg. I asked one of Schede's assistants if he was connected with the Hospital. His remarks were not at all complimentary to Unna, showing that scientific and personal reputation are not the same. It was made very evident to me that the famous specialist was not of good savor among his German brethren.

If one wants a perfect surfeit of surgery, in all its branches, let him come to Berlin. Bergmann, Bardeleben and Hahn, in general surgery, Martin in special gynæcological work, and Schweigger as one of the best operators upon the eye have interested me chiefly, though there are many others here of almost equal ability. Prof. Bergmann is at present one of the central figures of Europe. It will be remembered that he was prominent among the German surgeons who were in attendance upon the late Emperor. Within the last few days an official report of considerable length on this case has been given to the public. This report is, in fact, a scathing indictment of the conduct of Sir Morrell Mackenzie throughout his entire connection with the Emperor's case, and has very naturally created considerable discussion in which the whole of Europe is taking part, and in Berlin, at least, not a little indignation is felt. The report states that as early as March, 1887, Prof. Gerhardt, who was first called to see the then Crown Prince, had doubts as to whether the growth on the left vocal chord was a benign one, but that he destroyed the swelling by galvano-cautery. Two months later the swelling had reappeared and Prof. Bergmann was summoned. He examined the throat and at once declared that opening the larynx was necessary for the extirpation of the diseased tissue. Dr. Mackenzie was then named as a specialist, Bergmann and Gerhardt consenting that he should be called in. On the 18th of May there was a consultation, at which the above-named surgeons and four others were present, when they all agreed that it was a case of cancer and that the opening of the larynx was necessary. On the evening of the 20th of May all preparations were made for the operation, which was to take place the following morning, the Crown Princess actively assisting in carrying out the details. A few hours later Mackenzie saw the patient for the first time and declared that it was *not* a case of cancer, and that he would oppose any operation as long as a microscopical examination revealed no

appearances of malignancy. The German doctors consented to the delay. The next day Dr. Mackenzie removed a small piece of tissue, which was submitted to Prof. Virchow, who found no cancerous elements in it. The German doctors claim that this was not taken from the diseased portion of the chord at all, and Dr. Gerhardt says that he examined the throat immediately afterwards and found the *right* vocal chord injured. He told Mackenzie of this, when the latter replied that it was possible. Drs. Bergmann and Tobold both examined the throat and convinced themselves that the right chord had been tampered with, and the wound was not healed until more than a month afterwards. The Royal family were aware of the unanimous opinion of the German doctors, but Mackenzie maintained that he could cure the patient without an operation from the outside, either by the use of sharp-cutting forceps or the galvano-cautery. Mackenzie then ordered a powder of morphia, bismuth, catechu and sugar, upon which Dr. Gerhardt remarked that they "saw the cancer growing while a harmless powder only was being applied to it." In June Virchow made an examination of another specimen furnished him by Mackenzie, but at the removal of which the German doctors were not present. This examination was also negative as regarded cancer, and Mackenzie maintained, therefore, that his diagnosis was correct. The operation which the German doctors favored was thyroidotomy, which had been performed frequently by Bergmann, and always with good results, and the removal by that opening of the whole of the left vocal chord. (The papers were wrong in giving currency to the report that total extirpation of the larynx was urged by Bergmann.) However, Mackenzie stubbornly refused to give his consent to such a procedure, and gave repeated assurances that he had treated successfully more than one identical case by means of mild endolaryngeal treatment. "After the last consultation," says Bergmann, "we had entirely lost the confidence in Dr. Mackenzie which had induced us to call him in. We were brought to this, in the first place, by his manipulation of the larynx, which did not afford us a guarantee that he had really reached the growth with his instruments; and, in the second place, through the wholly arbitrary estimate of Virchow's opinion, as well as by his endeavors to shift the responsibility from himself to the pathologist. In the third place, we were influenced by the manner in which the press obtained the details of the

illness." The report goes on to say that on the 9th of November Dr. Schroetter, of Vienna, who had been summoned to see the Crown Prince, was told by Mackenzie that the swelling "now looked like cancer." Schroetter at this time urged the more serious operation of total extirpation of the larynx. To this, however, the consent of the Crown Princess could not be obtained. "Dr. Schroetter was entrusted with the duty of announcing to the Crown Prince his serious condition and the possibilities of either operation. This was done in the presence of the Crown Princess; and the scene, the Doctor says, was the most impressive of his life. The exalted patient betrayed no trace of trouble, but listened to the report with philosophical composure and true heroism. The Prince asked Dr. Schroetter whether the disease was cancer. Dr. Schroetter returned a somewhat guarded reply. Subsequently His Imperial Highness gave his decision against the major operation, and decided only to submit to tracheotomy, if that became necessary." To make a long story short, the German surgeons endeavor to throw the blame of the Emperor's early death on Mackenzie, and claim that but for him an operation would have been performed which would have very materially prolonged the life of their Royal patient.

Mackenzie pronounced the entire report "a tissue of falsehoods," and says that at the proper time he will satisfy the public of this and vindicate himself of all calumnious charges—that he is at present restrained from doing this for deep political reasons. The German papers hoot at the latter idea. It is very certain that a big and ugly quarrel has just begun which will go down in history. All the continental papers seem to be taking immense delight in saying very, very hard things about Mackenzie, and several Paris journals have expressed surprise that the fact of his being a notorious liar should be any revelation to the public. A few days ago I was walking on one of the principal streets of Berlin and noticed in a window the pictures of all the surgeons and pathologists connected with the Emperor's case, and in the midst of the group was one with a strip of paper tacked over the face with "Mackenzie" written on it. I at once negotiated with the wondering proprietor of the shop for the purchase of the same, and have it now in my possession *in tact*—perhaps to show when I go to London.

Fair-minded men, it is to be hoped, will reserve any decision upon this interesting quarrel until both sides have been given an impartial

hearing. There is a heap to be said which has not been said, and happy may be crowned heads if their escutcheons are not seriously tarnished in the fray. It has already been published that the Empress slapped Mackenzie on the face because when pushed by her to give a diagnosis he said: "Your husband has for twenty years had ——."

At any rate, Bergmann's clinics have been enormously crowded for several days, and he is looked upon as quite a lion here. He certainly is a most brilliant operator. The word "brilliant," it seems to me, is more applicable to him than to any other operator I have ever seen. He devotes certain hours to certain lines of surgery. One day he amputated four sarcomatous breasts. Another was devoted to diseased testicles, another to tumors of the neck, etc. He has the largest audience of any of the professors here except, perhaps, Prof. Virchow. The latter is the most ordinary-looking *great* man I ever saw, but there is a peculiar pleasure in listening to the instruction of any man from whose opinion there is no appeal, even if he does look less distinguished than the average country doctor. At the Anatomical Institute, Virchow and Valdeyer lecture on alternate days on Histology, and after the lecture spend an hour in giving their personal attention to the members of the class at their various tables. We are here instructed in the art of preparing and mounting specimens for microscopical examination, and of distinguishing the various histological tissues one from another and from those which are affected by disease.

Prof. Martin is, in personal appearance, as some of your readers can testify, very much like an ordinary Jersey bull, and possesses many traits in common with that animal. He is very rough, and but for the fact that he is only moderately ambitious as an ovarioto-mist, has little to commend him to the American student. If you would have me a little more specific in my charges, I will say that I recently saw him curetting a number of uteri. He dug with the sharp curette like one cutting rank weeds with a hoe, and during the operation he was looking in altogether a different direction from his patient and carrying on a conversation with one of his assistants. Again, during a perineorrhophy he told his patient to "raise up." She elevated her back, and seemed to think she was obeying orders. "I don't want you to raise your back, raise up your ——," said he.

In this monarchical government the lower classes do not seem to

think they have any rights at all; and instead of consulting a hospital patient about whether to perform this or that operation, or whether to perform none at all, the surgeon does what he regards the proper thing, and the patient never knows what is going to happen in many cases until after recovery from the anæsthetic, and then it has already happened. There are many *pros* and *cons* to this arbitrary manner of dealing with the unfortunate poor, and no rule could be made in regard to it which would be wisely applicable to every case.

Dr. Hahn is conducting an interesting series of experiments at the Berlin General Hospital with a view to ascertaining whether or not it is possible to infect the lower animals with cancer. I recently saw him amputate a sarcomatous breast and engraft some of the diseased tissue on the surface of a rabbit's back from which he had removed the skin. The rabbit was then carefully dressed in a plaster of Paris jacket. Another patient was brought in with a large ulcer of the leg, and bits of the rabbit's skin were engrafted on the sore. Will this skin be hairy?

This operation recalled to my mind one which I performed five years ago while I was one of the house surgeons in the Charleston Hospital. I had under my care a young mulatto who had a large but perfectly healthy ulcer on one of his legs. My friend Dr. Kendall performed the operation of circumcision on a young white man about this time for phymosis consequent upon a chancre of the prepuce, which had entirely healed, leaving, however, an ugly cicatrix, which necessitated the operation. Theoretically, the foreskin was perfectly healthy, so I cut some of it into fine bits and grafted them on the mulatto's ulcer. In a few days, under oil silk, the ulcer had become entirely covered over with a delicate bluish-white skin, and I was much pleased with the result. Pending the more thorough organization of the skin I kept the patient in the hospital with a nicely-fitting bandage on the leg. Several days after this I thought it about time to discharge him, and so unbandaged the leg to take a final look at the result of my operation. What was my dismay to find that the entire sore was a glorious chancre! Of course cleanliness and iodoform soon made a healthy ulcer of it again, but for two weeks it was a hard matter for me to look that patient straight in the face. What did the experiment prove?

Very truly yours,

J. M. HAYS.

THE USE OF THE DILATOR AND INTRA-UTERINE STEM IN THE TREATMENT OF DYSMENORRHEA AND STERILITY (RAPID DILATATION).

By AUGUSTIN H. GOELET, M.D., of New York.

(Read before the Medical Society of the State of North Carolina, at Fayetteville, May 8, 1888.)

It is the purpose of this paper to show that dilatation, if maintained, is a safe, satisfactory and reliable substitute for all the cutting operations upon the cervix heretofore used to overcome stenosis, obstruction and flexion of the cervical canal, and at the same time to show that it is entirely free from the dangers and objections urged against these operations. But do not confound this operation with divulsion, which is to be classed in the same category with division and discission, and which with them should be denounced as barbarous mutilation.

Perhaps, for a better understanding of the terms, it will be well to say here that by division is meant Sims's posterior incision of the whole structure of the cervix up to the vaginal junction, which includes the tissues at the internal os to a considerable extent, and sometimes the fibers anteriorly. Discission is deep incision of the whole cervical canal in several directions, including both the external and internal os. And by divulsion we mean forcible rupture of the fibers of the cervix, usually with scarification of the constricting fibers in every direction, and a constant tearing and lacerating of the tissues, the latter being a favorite with a prominent specialist in New York, who uses an instrument which he says must be capable of exerting a pressure of two hundred pounds. Should we consider this a justifiable procedure? It is plainly the surgeon's duty always to imitate or restore nature, but never to deface her; nor is he justified in submitting his patient to any more risk than is actually necessary to accomplish the result aimed at.

These operations are extremely apt to be followed by disastrous consequences, either immediate or secondary, and, being unnecessary should be stricken from all works on diseases of women. It is really astonishing that they still have advocates, who appear to be blind to their dangers and failures, when there is a better, safer more natural and perfectly satisfactory operation in dilatation. If

immediate and permanent relief follows properly performed dilatation, where exists the necessity, or even the excuse, for these more dangerous methods? When such a rash and unjustifiable procedure as divulsion is described synonymously with dilatation by most writers upon this subject, it is not strange that we find some who object to rapid dilatation in any form. They say "we fear the dilator; it is a dangerous instrument." I grant it is, in careless hands. So is the razor; but it is a necessity. Should we condemn an instrument because some have gone too far and abused it?

If the dilator is used as I have advised and urged, with extreme care and with just enough force to accomplish a moderate amount of dilatation, the process will be only an imitation of nature, and entirely devoid of danger. It was intended that the cervical canal should dilate. It is what takes place in labor; it is what takes place in abortion; and, although to a lesser degree, the same thing occurs at every menstrual epoch. This mild dilatation, however, would be insufficient in many cases, indeed in most cases, unless something were done to maintain it. For this purpose I have devised this little instrument, which I call an intra-uterine stem:



Fig. 1.

It is only two inches long, while the virgin uterus is two inches and a half, and is perforated through its center with a considerable-sized channel, which allows free drainage from the uterine cavity while it is in position. It terminates in a cup-shaped shoulder which prevents further entrance, and, by fitting the cervix nicely, the suction produced aids in its retention.

This is introduced after the dilatation is complete, and retained in position by a cotton tampon. It is retained usually about a week, the patient meanwhile being confined to bed. There are three sizes, 10, 12 and 14 of the English scale. The first size is used for the first twenty-four or forty-eight hours, then it is replaced by No. 12, and again, in a day or two, there will be enough relaxation to allow the introduction of No. 14.

The advantage and importance—nay, the actual necessity—for the

use of the stem in the treatment of these cases is evident to any one who will give the matter serious thought. The resilience of rubber (the most resilient of all substances) may be overcome by constant stretching. But it would be a tedious process to overcome the resilience of a piece of rubber tubing at a given point by repeated interrupted stretchings, as compared with a lesser force constantly applied. As an illustration, one end of this little piece of rubber tubing has been stretched over a hard substance which is larger than its caliber, and has been left there until it has lost its resilience in part and assumed the size and shape of the body over which it has been stretched. This is permanent because its power of resistance has been overcome by a force constantly applied.

The stem placed in the cervix after it has been dilated prevents recontraction by exerting a constant pressure upon the constricting fibers. During the first twenty-four or forty-eight hours the stem will be grasped firmly by the cervix; but later relaxation occurs, and a larger size can be introduced, which could not have been done at first without carrying the dilatation further. Can there now be any doubt of the necessity for the stem?

Dr. John Ball, of Brooklyn, ten years ago, in a paper read before the Medical Society of the State of New York, recognized the necessity of a stem to maintain the result gained by the dilator. But his stem was a rude affair, impracticable and dangerous, because it allowed forces operating outside of the body to act directly upon the uterus; besides, it plugged the canal and prevented drainage; and it was abandoned. Another stem has been devised, which is two inches and a half long, curved and grooved on the side for drainage, but the collapse of the mucous membrane into the groove stops it up and defeats its object. It is used only by its originator for flexions and as a drainage tube.

To those who object to the stem as dangerous, I would say that at one time they did not hesitate to use a sponge or laminaria tent, which blocks the canal, prevents drainage and provokes constant irritation by its expansive power as long as it is retained. The stem is absolutely clean, allows free drainage and provokes no irritation if the patient is kept quiet. In an experience of over three hundred cases I have yet to see one objectionable symptom follow its use.

I first advocated the use of the stem after dilatation in a letter to the *Medical News* of November 15, 1884, page 558; and again in an

article of considerable length in the same journal of April 18, 1885, page 431, and gave illustrative cases. In March, 1886, I read a paper on this subject before the Section on Obstetrics and Diseases of Women and Children of the New York Academy of Medicine, which appeared in the *Medical News* of April 3, 1886, page 375. I may appear persistent, but there are some whom I have not yet convinced of the correctness of my principle.

Indications for the Stem.—1. The stem is used after dilatation for stenosis to maintain the dilatation and prevent immediate recontraction, which is sure to follow if it is not used.

2. To splint up a flexed uterus after it has been straightened and the flexion overcome by the dilator.

3. To permanently remove obstructions due to hypertrophy or inflammatory thickening, and the consequent hyperæsthesia of the lining membrane of the canal, which it does by the constant pressure it exerts while in position.

4. To secure free drainage from the uterine cavity.

By far the most important indication for the use of the dilator and the stem is to secure free drainage from the uterine cavity of the normal secretions, and of the increased secretions of disease, such as uterine catarrh or leucorrhœa, and thus to forestall and prevent diseases of the Fallopian tubes and ovaries. Remember that every month a woman has a congestion of the pelvis and generative organs which Nature has intended to be relieved by a free flow of menstrual blood. If this flow is natural and escapes freely, the congestion is relieved, and she is better for having properly performed one of her natural functions. If, however, there is any obstruction to this flow at the cervical canal, it accumulates and distends the uterine cavity until the organ resists and contracts to expel it. Repeated efforts on the part of the uterus finally overcome the obstruction temporarily; but such an unnatural and imperfect menstruation tends to continue the congestion rather than relieve it, and, sooner or later, pelvic pain, leucorrhœa and back-ache will be manifested as an evidence of this condition. Disastrous consequences are easy to infer after years of such periodically unrelieved congestions.

A uterine catarrh or leucorrhœa production by congestion consequent upon obstruction of the cervical canal calls unmistakably for dilatation and the subsequent use of the stem to remove the hypertrophy of the canal which is the barrier to free drainage. These

discharges, being dammed back, distend the uterine cavity, and are forced back into the tubes, producing inflammations there (such as salpingitis), and sometimes escaping into the peritoneal cavity, producing septic peritonitis. The origin of a great many pelvic troubles, often thought obscure, may be traced to this condition of the cervical canal. The remedy is dilatation maintained, and lifting of the heavy, congested uterus to its proper place in the pelvis by a well-digested pessary as soon after the operation as it can be borne.

There is urgent necessity for investigating such symptoms as leucorrhœa and painful menstruation when they first occur in young girls before they produce structural changes in the pelvic organs. Especially is this necessary before marriage, because these conditions are always aggravated after marriage unless immediately relieved by pregnancy, and if this remedy is delayed too long the inflammation will have already extended to the Fallopian tubes and ovaries, and conception is impossible. Any mother who neglects a daughter complaining of these symptoms has no one to blame but herself if she develops a tumor or ovarian or tubal disease which can only be cured by removal of the diseased structures.

When dysmenorrhœa is associated with stenosis or acute flexion, the indication for dilatation is evident, but when the os is apparently patulous it is not always an easy matter for one of limited experience to determine just when there is enough obstruction in the canal to demand it. If dysmenorrhœa exists in either a married or an unmarried woman, and there is a discharge from the os, which is eroded, and the passage of the sound through the interval os gives pain, even if there appears to be no obstruction, there will be enough inflammatory hypertrophy of the lining membrane of the canal to produce obstruction and hyperæsthesia when it is congested for menstruation, and dilatation should be done. If it has existed long enough to produce tenderness in the ovarian regions, with thickening and enlargement, there is less danger in the operation than in the neglect of free drainage for the discharge.

The Operation.—The Sims position and speculum are imperative in doing this operation, especially where there is flexion. And an anæsthetic is essential, because it produces relaxation and because the operator can work less hurriedly and with greater care when there is no apprehension of giving pain, to say nothing of the suffer-

ing, saved the patient. Dilatation should never be done at the office and the patient sent home.



Fig. 2.

The dilator shown here is a modification of the Palmer instrument. The blades are made stouter and broader on their lateral surfaces to prevent digging into the tissues, and the shoulder has been made more abrupt. The thumb-screw attachment has been removed. Any instrument capable of exerting more power than this should never be used.

I never use force in introducing the dilator. If the canal will not admit the beak after gentle manipulation (which is not always the case), I use successive sizes of conical cervical bougies (Hanks's), commencing with the size which the canal will admit without force, and when a No. 11 can be passed the dilator will enter freely. The cervix is seized with an angular tenaculum, which allows more room than a straight one and does not tear out, and is steadied while the dilatation is done without using the screw attachment on the handles; because, should the instrument slip backward (which it is very prone to do), the tissues would be lacerated before the pressure could be removed. When the dilatation has been carried as far as appears necessary (and there is no rule to govern this, for the amount varies with each case), the instrument is removed, and larger sizes of cervical bougies, from Nos. 13 to 16 or 18, are passed successively to insure the completeness of the dilatation and to prepare the way for the stem.



Fig. 3.

In introducing the stem, the angular tenaculum, which is here shown, is actually necessary to secure a proper direction of the stem,

as, with the straight tenaculum, the cup shoulder of the stem impinges against its shank and deflects the point of the stem from its course before it has entered the internal os (which is the important point), and pressure upon it while the cervix is fixed with the tenaculum pouches the canal in front of the internal os, and the traction upon the cervix elongates or stretches it until it reaches the cup shoulder and gives the appearance to the stem of being up in position when it is not. A failure will be the result unless this is detected.



Fig. 4.

The applicator shown is also very necessary in introducing a straight stem, as the curve near the point allows the stem to pass the internal os with more ease, and the sliding spiral on the shank may be moved with the thumb, and the stem, when in position, may be pushed off the bulbous point which holds it during introduction. The stem is removed every day, cleansed and replaced, and is used for one week. The patient may get up on the day after its final removal.

Too much must not be expected of the operation alone. Subsequent treatment is frequently necessary to relieve existing conditions dependent upon the cervical obstruction. Mild cases, treated early, may need little or no attention after the removal of the cause; but in cases of long standing, with inflammatory complications resulting, appropriate treatment is necessary to effect a complete cure, and the operation must be looked upon as an initial step in this treatment. Failures after this operation may be traced to a neglect of this precaution. If treatment is discontinued as soon as the actual dysmenorrhœa is relieved, and the pelvic pain and uterine catarrh due to congestion or inflammatory changes are allowed to go on, while they may or may not cause the patient much annoyance, they are often sufficient to prevent conception.

It is best to use a well-adjusted pessary after these operations (where there is nothing to contra-indicate it) to lift the uterus to its original place in the pelvis, which will aid materially in relieving congestion.

I will append a few cases selected from my case-books to how the different conditions for which this operation is appropriate and effectual.

The first five cases are illustrations of primary or congenital stenosis :

CASE I.—*Stenosis of both external and internal os.*

Mrs. Emily H., widow, aged thirty-five years, commenced to menstruate when eighteen years old, with great pain from the first. She was married when twenty-one years old, and was married for about three years without conceiving. Her dysmenorrhœa was very much aggravated, and in addition she suffered with severe pelvic pain, leucorrhœa and back-ache. Examination showed both external and internal os very small, the probe causing sharp pain as it passed the internal os. Dilatation was done under ether, June 14, 1886, and the stem used for one week. She has never suffered any pain with menstruation since, and is entirely well.

CASE II.—*Stenosis with pin-hole os.*

Miss E., aged nineteen years, suffered with dysmenorrhœa since puberty at fourteen years, and it finally became so intense as to be unbearable. A very small cervix was found with pin-hole os and the small uterine probe was passed with difficulty, causing great pain. Dilatation was done under ether, October 23, 1884. Her subsequent menstruations were free from pain, and six months after the sound could be passed with ease.

CASE III.—*Stenosis at the internal os.*

Mrs. M., aged thirty-three years, married ten years, has suffered with dysmenorrhœa since puberty, which was very early. Although her suffering was severe before marriage, it was bearable; but afterward it became so much worse as to render her life one of constant misery. The anticipation and dread of the next period rendered her almost a monomaniac upon the subject during the interval. She had previously sought relief in Edinburgh, London and New York, and persistently refused to allow the knife to be used. No other remedy was offered her. She was sent to me by Dr. Wakefield, of Jacksonville, Fla., after seeing my first paper on this subject. He stated

that he had been obliged to use morphine hypodermically to relieve her suffering, and as this lost its effect it had been frequently obliged to resort to chloroform inhalation to relieve convulsive attacks produced by the severe pain. She was operated upon under ether, May 25, 1885. There was marked stenosis of the internal os. Her dysmenorrhœa has been completely and permanently relieved. Dr. Wakefield wrote me only a few months since that she was in excellent health and had no return of the pain.

CASE IV.—*Stenosis after persistent treatment with sponge tents.*

Miss Virginia G., aged thirty-five years, commenced to menstruate when thirteen years old with severe pain, which lasted as long as the flow. Every succeeding menstruation was attended with pain of the same character. When eighteen she lifted something and felt that she had hurt herself. At the next period the pain was very much more severe. Eight years previous to consulting me she was treated with sponge tents every month for four or five months with some temporary relief. When the treatment was discontinued the pain became as severe as before. The treatment by tents was recommended and continued for two years and a retroflexion pessary used. For a year previous to seeing me she had no treatment, and her dysmenorrhœa was as bad as ever.

Examination revealed a retroflexed uterus with a pin-hole os, which would only admit a small uterine probe. The same probe passed the internal os with considerable difficulty and caused severe pain. Dilatation was done under ether, April 5, 1887. The introduction of the dilator was out of the question until successive sizes of uterine bougies had been passed to prepare the way. The tissues were rigid and dense and the dilatation was difficult, but was carried to a point where a No. 10 bougie could be passed. Twelve months have elapsed and she has never since experienced the least pain during menstruation, and an ordinary-sized sound can now be passed freely and without giving pain. She has worn a pessary since the operation.

CASE V.—*Stenosis associated with epilepsy.*

Mrs. K., aged eighteen years, commenced to have epileptic spasms when about twelve years old. Her menstruation appeared scantily

and with much pain two years later, and with it the epileptic attacks increased in frequency. She had noticed that the attacks were more apt to occur just before and just after menstruation, which was still scanty. Examination showed an undeveloped uterus (only two inches) with marked stenosis. Pelvic contents normal in other respects. Dilatation done under chloroform, February 7, 1887. She had two slight attacks while wearing the stem—the first the day following the operation and the next on the third day—but none after. Her next period was free from pain, normal in quantity, and there was no return of the epileptic attacks. More than a year has now elapsed and she is enjoying excellent health still.

The next two cases will illustrate secondary or acquired stenosis :

CASE VI.—*Extreme stenosis following miscarriage.*

Mrs. E. S., aged twenty-seven years, married ten years, has menstruated since she was ten years old without pain until after having a miscarriage at five months, when one year married. After this she suffered with severe and constantly increasing dysmenorrhœa, and never became pregnant again. For a year previous to the operation she had convulsions at every menstrual period, until the flow became freely established. Examination showed the uterus in normal position, but it was actually impossible to pass the probe through the internal os. The uterus was sensitive and enlarged. Dilatation was done under ether November 16, 1885, and great difficulty was experienced in introducing the dilator. In fact, it could not be done until a cotton-wrapped flexible applicator was forced through. The cervix was so rigid and tough that it sprung the blades of the dilator, and it was difficult at first to introduce a No. 10 stem, which was grasped by the cervix as in a vise. In four days, however, a No. 14 stem was introduced with perfect ease. She has menstruated since without any pain whatever, and no convulsions. One year after the operation I could pass the sound or an applicator wrapped with cotton with perfect ease and without giving pain. There had then been no return of the dysmenorrhœa.

CASE VII.—*Stenosis from cicatricial contraction following division of the cervix.*

Mrs. N., aged forty, married twice, with one child fourteen years old. She was treated by Dr. Emmet when first married, and her

pregnancy was the result. She advanced dysmenorrhœa at that time. It developed subsequent to the birth of her child, and in 1882 she was treated by a distinguished physician of Washington, D. C., who did Sims's posterior division of the cervix in his office and sent her home. She was worse after this operation. In Galveston, Texas, she was treated in 1885 with sponge tents repeatedly without permanent benefit. And in the spring of 1886 she was treated in Boston by bougies at stated intervals. The treatment was so painful and the result so unsatisfactory that she abandoned it after a few months' trial. When she consulted me, in December, 1886, she declared herself worse than ever before. Dilatation was done under ether, December 29, 1886, and there was found marked stenosis of the internal os from cicatricial contraction following the division of the cervix. The dilator could not be introduced without previous dilatation with conical bougies. After the dilatation was completed the edges of the posterior slit were pared and brought together with silver wire sutures and the stem introduced. The result was perfect and satisfactory one month later, when she left the city. She has since written me that she has no pain during menstruation.

The next case will show the effect of dilatation upon a conical cervix :

CASE VIII.—*Stenosis from ante flexion with elongated cervix.*

Miss A. B., aged twenty-four, has menstruated since she was fifteen years old, at first without pain. But for three years past she has been having pain with every period, and every year it has increased in severity. Lately she has suffered severe pain, accompanied with back-ache for two or three days preceding the flow, which is very profuse. This continued during the whole period, which usually lasted a week. Examination showed constriction at the internal os, ante flexion of the body, and a conical cervix which was greatly elongated, the os being near the vulva. Dilatation was done under ether, January 3, 1887. The constriction offered great resistance to the introduction of the dilator, and the dilatation was accomplished with difficulty with my strong dilator. The stem could not be introduced until it had been previously curved by heating over a spirit lamp. A straight stem was used two days later, however, when a larger size was introduced. A pessary was used soon after the operation to prevent a recurrence of the malpo-

sition and to lift the uterus in the pelvis. Her subsequent periods were normal and free from pain and back-ache. When seen last, in November, 1887, she was enjoying excellent health, and was still wearing a pessary. The condition and position of the os were normal.

The next three are cases of dysmenorrhœa due to flexions of the uterus producing either stenosis or obstruction.

CASE IX.—*Anteflexion producing obstruction at the internal os ; conical cervix.*

Mrs. S., aged twenty-seven years, married one year, has menstruated since thirteen years old, with very little pain before marriage, but it increased after marriage, and she did not become pregnant. Three months before consulting me she jumped from a carriage and felt that she had hurt herself, and since then the dysmenorrhœa has been very much worse, and she has had constant pain in the right side. On examination I found a conical elongated cervix and small external os, which was extensively eroded. There was a slight obstruction at the internal os, the sound producing pain as it passed and the uterus was anteflexed. Dilatation was done, February 15, 1887, under ether. She made a good recovery after appropriate treatment for the granular cervix and endometritis. The dysmenorrhœa and pain in the side were immediately and permanently relieved. She became pregnant after treatment was discontinued, and was confined, January 3, 1888, less than a year after the operation.

CASE X.—*Anteflexion, obstruction at internal os and endometritis ; cap-brim cervix.*

Mrs. C. H., aged twenty-four years, married two years (sterile), has menstruated since fourteen years old, always with pain, until the flow was freely established. The dysmenorrhœa was much aggravated after marriage. Examination showed anteflexion, obstruction at internal os, the passage of the probe producing acute pain and a condition of the cervix which has never been described before, viz : the anterior lip of the cervix projected forward like the brim of a cap, and something like what is seen in a bilateral laceration of the cervix which has stood for a long time. But in this case

the projecting lip was thin and the cervix behind it was eroded. There was descent of the uterus, which was heavy, and this condition was probably produced by pressure upon an habitually full rectum. Dilatation was done under ether, February 27, 1886. Her dysmenorrhœa was immediately relieved, and a pessary, with appropriate local treatment, soon relieved the eroded condition of the cervix and the endometritis. She became pregnant in June, 1887.

CASE XI.—*Retroflexion and obstruction associated with reflex asthma.*

Miss R., aged eighteen, was thrown from a carriage when ten years old and injured her back. She recovered sufficiently to lead her parents to suppose there would be no further trouble. When menstruation appeared it was with an effort, very scanty, and associated with some pain. For two years previous to the operation she had been under my observation, and at almost every period something had to be done to establish the flow. A few days before she would have an attack of asthma, which resisted all treatment and which would increase in severity every day until menstruation was established, when it would gradually subside and disappear. The flow was scant and often retarded for a week or more, and the patient was a constant sufferer from back-ache, leucorrhœa and dysmenorrhœa. At the period preceding the local interference there was a decided convulsive attack, followed by complete nervous prostration, which decided the future action. Examination revealed an acutely retroflexed, undeveloped uterus low in the pelvis, with obstruction at the point of flexion. Dilatation was done under ether, April 10, 1886. A pessary was used to maintain the corrected position of the uterus, and her subsequent periods for a year were normal, and the asthmatic attacks did not again appear. After this a course of electricity by the faradaic current was necessary to develop the uterus, as the flow commenced again to be insufficient.

CASE XII.—*Anteflexion, obstruction at the internal os and concomitant enlargement of left ovary.*

Miss K., aged twenty-one years, has menstruated since she was fourteen years old, with no pain for the first two years. When sixteen years old she commenced to have pain, mostly before the flow

made its appearance, and during the last two years it has been very much more severe than formerly. For six months past the pain has been so severe as to compel her to go to bed and take something to bring on the flow. She has complained also of severe pain in the left ovarian region during the interval, which is very much worse just before menstruation. This continued during the flow, and for sometime after, being only slightly relieved by it. Examination showed the uterus anteflexed, low in the pelvis and sensitive to the touch, but freely movable; and there was enlargement of the left ovary, which was exquisitely sensitive. The external os was patulous, but eroded; and the passage of the sound through the internal os caused excruciating pain, but there was apparently little obstruction. Dilatation was done, November 26, 1887, under ether. The left ovary was examined at the time and found to be of about the size of a walnut. She menstruated December 17th freely without pain, and there was very much less pain in the ovary. She was treated with applications of cocaine to the vagina during the next interval, and she had little or no pain. Her next period was not preceded by the usual pain in the left ovarian region. Treatment was continued during January. When examined March 1, 1887, there was no perceptible enlargement of the ovary and no undue sensitiveness about the uterus, which was normal. She has had no pain since.

The following three cases will show how hypertrophy and thickening of the lining membrane of the canal may produce dysmenorrhœa and prevent drainage of the discharges from a co-existent endometritis or catarrh, and how this condition is relieved by dilatation :

CASE XIII.—*Obstruction at the internal os, with endometritis and granular erosion of the cervix.*

Mrs. C., aged about twenty-seven, married five years (sterile), was sent to me by Dr. Wakefield, of Jacksonville, Fla. She had suffered with dysmenorrhœa since puberty, but it had been very much aggravated since her marriage. She was for sometime under the care of a specialist in Cincinnati, but was not benefited by his treatment. For a year previous to consulting me her suffering at every period was indescribable. Examination showed a very sensitive uterus, low in the pelvis, a granular erosion of the external os and a

chronic endometritis. The passage of the sound through the internal os produced excruciating pain, but there was apparently very little obstruction. Dilatation was done under ether, September 14, 1885. Her next period was entirely free from pain. Dr. Wakefield wrote me a year later that she continued to menstruate without pain, and very recently he wrote that he believed she was pregnant. The delay of the latter result was probably due to her persistent refusal to undergo after-treatment.

CASE XIV.—*Obstruction at the internal os, chronic endometritis and erosion of the cervix.*

Miss M., aged twenty-six years, commenced to menstruate when twelve years old. She always had dysmenorrhœa, and when eighteen had to discontinue her studies because of ill-health due to excessive dysmenorrhœa, back-ache and leucorrhœa. For three years previous to the operation her symptoms were very much aggravated. The pain preceded the flow, and was somewhat relieved by it, but severe back-ache followed. Examination showed the uterus low in the pelvis, greatly congested, and there was chronic catarrh of the uterus and erosion of the cervix. The sound produced severe pain as it passed the internal os, but there was not much apparent obstruction. Dilatation was done under ether, February 5, 1887. She menstruated on February 18th without any pain or inconvenience, and her subsequent periods were free from pain. A pessary was used, and the local trouble received treatment. She is now enjoying excellent health.

CASE XV.—*Obstruction at the internal os, endometritis and sciatica.*

Mrs. M., aged thirty-five years, married eight years (sterile), had very little dysmenorrhœa until after she was married, when it increased in severity. For a year previous to the operation she was troubled with sciatica, which was worse just before and during the menstrual period, and which resisted all treatment. Examination showed a heavy sensitive uterus low in the pelvis, with chronic endometritis and some obstruction at the internal os, the sound producing severe pain as it entered. Dilatation was done under ether, November 6, 1885. Since the operation she has had no dysmenorrhœa or sciatica. She became pregnant one year after.

In conclusion, I would say that I have never been obliged to repeat the operation since I adopted the use of the stem, and have never failed to permanently cure the dysmenorrhœa; while other operators, who do not use the stem, frequently find it necessary to repeat the dilatation.

I regard the statistics of sterility as deceptive and unreliable, inasmuch as it is possible to keep all patients under observation after operation. In consequence, some are counted upon the negative side before a sufficient time has elapsed to render conception improbable. Of those operated upon, where sterility existed and where conception could have been expected, about one-third have conceived.

SELECTED PAPERS.

THE CHRONIC PERFORATING ULCER OF THE BLADDER

By S. D. THURSTON, M.D., Dallas, Texas.

(Read before the North Texas Medical Association.)

In offering this article to my medical confrères I feel no hesitancy in assuming the above nomenclature, which, though unmentioned by any of our authorities, I hope to show should have a place in all of our text-books. The title indicates the true pathological lesion, at the same time it is difficult to eliminate a local and circumscribed area of ulcerous tissue from a general chronic cystitis. The importance, however, of this differentiation, in its bearing upon the management and treatment of the malady, warrants me in its adoption.

The chief object of this paper is to show, as well as I am able, that such a pathological lesion does obtain, independently of any general condition of the walls and several coats of the bladder; that it can be recognized by its peculiar symptoms, and is curable only by surgical interference.

Before going further into this indefinitely defined and rarely mentioned disease, I will report one case, which, occurring under

my own observation, showed from the post-mortem examination, the pathological appearances upon which the nomenclature is based:

Mrs. T., fifty-two years of age, married, five feet four inches high, weighing, in health, 118 pounds, brown hair and blue eyes, mercurial and vivacious in temperament and history of phthisis and gout, on father's side, was married in 1856 and became the mother of two children in the first four years thereafter.

From 1860, the date of birth of second child, she was never pregnant, though in good health mentally and physically. In the spring of 1876, at the age of forty-two, the menstrual molimen ceased permanently, followed by some impairment of health; until the winter of 1880. In the summer of 1881 all the effects of the menopause had passed away, and her health, at the age of forty-seven, became excellent. She then weighed one hundred and forty pounds, was cheerful and happy, and continued in this condition until the fall of 1883, when the first mutterings of the storm, that was to sweep her from earth, made themselves apparent.

About the middle of October, 1883—in the act of entering her carriage, her foot on the step—a restless horse, moving suddenly and bringing the rear wheel of the vehicle with great force against the sarcum, sat her violently to the earth on the point of the coccyx. Much lameness and soreness followed, which continued for several weeks and was increased by the sitting or standing posture.

A careful examination disclosed no fracture or other injury to the bones, but concussion of the spine, with severe contusion of the external tissues covering the sarcum. These evidences of injury passed away in four or five weeks, but left an irritability of the bladder—developed during the period of recovery—which was pronounced neurotic, and would eventually relieve itself, without medical aid, as soon as the spinal column recovered entirely from the shock.

This irritability evinced itself chiefly in a want of power of retention, but free from special pain; an ounce of urine created an irresistible desire for its voidance; any attempt to control or restrain the bladder was accompanied with extreme discomfort or rigors, and so urgent was this that it deprived her of the solace and diversion of society.

This irritability persisted—sometimes greater at other times less—without pain or tenesmus, until the summer of 1885, when the most violent symptoms of vesical disturbance supervened.

A thorough exploration of the bladder with the finger, the urethra having been properly dilated, disclosed nothing except a slight thickening of its walls, while chemical analysis and the microscope revealed a perfectly normal urine.

In September, 1885, the pain and tenesmus became so violent, the patient often saying, "Oh, my bladder will be squeezed out," as to demand some radical measures for relief. To this end, gradual dilatation of the urethra, by means of sounds, was adopted, care being observed to pass the sound just through the neck so as to avoid injury to the hypertrophied walls.

This gave marked relief, and when the dilatation reached the extreme, so that the urine flowed directly out of the bladder, without any effort on the part of the patient, the relief from pain was absolute. This mode of treatment was continued, at intervals, until July, 1886, without perceptible improvement in the disease.

I then sent her to the "Woman's Hospital" in New York, to the care of Dr. Nathan Bozeman, requesting him to make an artificial vesico-vaginal fistula, and put the bladder absolutely at rest, which I believed to be the only means of cure. I was induced to this course because of the comfort and care of hospital nursing during the irksome period it would be necessary to keep the fistula open.

I wrote Dr. Bozeman a full and detailed history of the case, and called his attention especially to the bladder, but he declined to make the opening, saying it was not necessary, as the bladder was only affected secondarily from the pressure of an ante-verted uterus.

Notwithstanding he failed to recognize the true character of the disease, she remained under his treatment until the last days in December, 1886, and returned home the first of January, 1887, depressed and disheartened, no better as to her bladder disorder, yet slightly improved in general health, from the kind hospital attention.

No surgical interference was made until the last week in February following; at this time the symptoms became alarmingly severe and her suffering insupportable, to such a degree that, at her earnest entreaties, a vesico-vaginal opening was made. The relief from this operation, so far as it related to the terrible pain and tenesmus, was complete, but too much damage had been developed in the entire vesical tissues. She grew worse from day to day, and died April 6th, 1887, of pain, the result of a "chronic perforating ulcer of the bladder,"

The autopsy made on the morning of the 7th revealed the following : " A perforating ulcer in the posterior wall of the fundus of the bladder, closely resembling a "bullet-hole," whose points of entrance and exit would be the inner and outer walls respectively of the organ. The ulcer was circular in form; its inner opening about the size of a twenty cent piece, its outer the size of a half-dime. The outer opening was shut off from the peritoneal cavity by the omentum, which had, by adhesive inflammation, adhered to the bladder walls for some distance beyond the margin of the ulcer, thus really forming an impervious floor or roof for it, and effectually preventing the entrance of matters into the peritoneal cavity. The circumferential margin of the ulcer was somewhat ragged and markedly gangrenous. The floor of it was covered with a sloughing detritus. The bladder was concentrically hypertrophied, to such an extent as to limit its capacity to about an ounce of fluid. There was no evidence of inflammation, such as is found in cases of cystitis, nor any signs of pelvic or general peritonitis. The uterus, atrophied to its proper size, was, together with all the other pelvic organs and tissues, perfectly healthy. The liver, spleen, kidneys and all the abdominal and thoracic organs were normal and no evidence of phthisis to be found."

It is obvious from the history here given and the post-mortem appearances, that no pathological lesion existed other than that of the bladder, and a perforating ulcer of that organ, of long standing was the only morbid element to be found. The autopsy demonstrates, beyond dispute, that a "chronic perforating ulcer of the bladder" can exist independently of general chronic cystic inflammation, and that the symptoms may be differentiated.

The diagnostic symptoms may be summed up as follows: Inability to retain, for the shortest period, the smallest quantity of urine; violent and exhausting pain in and around the region of the bladder; each voidance of urine attended with the most agonizing tenesmus; total absence of febrile excitement; urine, until near the approach of dissolution, chemically and microscopically free from morbid elements or deposits, and the entire absence of the common signs of cystic catarrh. These were the prominent, indeed the only symptoms, in the above case, aside from general emaciation of the body, from its incipency, to within three days of death. About this time signs of local peritonitis, accompanied with fever, tenderness in one spot, the size of a silver dollar, over the right hypochondrium, and delirium made

their appearance, while floating in the urine were to be seen small flocculent particles of shreddy matter tinged with blood; these, under the microscope, proved to be broken down bladder tissues mingled with pus and blood.

An ante-mortem diagnosis was never made beyond some serious lesion of the bladder. I was present with the case day and night, except when in New York, from its onset to its close, aided by the energy, zeal and skill of my friends. Such acknowledged lights in the profession as Leake, Sutton, Gill, Eagon and Graham, with their recognized ability and talent, exhausted the vocabulary of remedial agents, both medical and surgical, with no avail, save temporary relief. Nothing was left undone which experience and good judgment suggested in endeavoring to solve the problem, to arrive at the cause of so much intense suffering and to apply the remedy. The skill of New York was laid under contribution; the clear-headed Bozeman, after mature thought and deliberation, missed the mark and pronounced it the result of uterine ante-version. My medical friends joined fully with me in the opinion that nothing but absolute rest to the bladder would effect a cure, and to this end the aid of the New York gynecologist was sought; he failed to recognize the gravity of the situation and declined to take the responsibility. I am firmly fixed in the opinion if the needed rest had been given as late as the fall of 1886, by making an artificial fistula, the patient would have recovered.

The literature of this subject is exceedingly meagre. Whether it is confined to the female or not I am unable to learn. Mr. Reginald Harrison, in the "International Encyclopedia of Surgery," says some remarkable instances of perforating ulcer of the bladder have been recorded, but does not specify whether in the male or female. He also refers to one case in the male, reported by Mr. Bartlett, of Birmingham, in the *London Lancet* for February 5th, 1876, in which he says: "The ulcer, whilst confined to the bladder, appears to have gone through all its stages without presenting any symptoms. A sudden lifting movement, which occasioned acute pain, broke down recent adhesions, between the bladder and bowel, leading to extravasation of urine into the peritoneal cavity, and thus ultimately causing death." This is not a similar case to the one herein described, but is the only one, in the male, I have been able to find.

The first reference is by Rokitansky, who briefly refers to this

special form of ulceration as a limited perforating ulcer, closely resembling the perforating ulcer of the stomach, but is silent as to its treatment or mode of diagnosis.

I find a short history of four cases reported in the London *Lancet* for March, 1871, by Mr. Lawson Tait, to whom I acknowledge my indebtedness for the selection of a name for this malady.

In two of these cases he assisted Sir James Simpson, and, after exhausting all remedies, resorted to the artificial fistula, with perfect success in both. The third was under the care of Mr. Tait, at the time of his writing the report, and, after painting an exact picture of the within case, says: "I know of nothing, short of the fistula, which will cure her." The fourth case, he was present at the post-mortem and gives a vivid description of the pathological character of the ulcer. This is the sum of the literature concerning this subject I have succeeded in finding.

My own convictions, strengthened as they have been by the reading of Mr. Tait's report, impress me with the one single idea of relief and permanent cure, and that is the artificial vesico-vaginal fistula.

A diagnosis based upon the above recorded symptoms will justify any surgeon in the performance of the operation, if for no other reason than the perfection of his diagnosis; and I here beg that it be done in the interest of science and the relief of the poor, wretched and agonized patient. Do not wait until the vital energies are wasted and destroyed by *pain*, but make it as soon as satisfied relief can be obtained by no other agency, and you will reap an ample reward.

As recommended by Mr. Tait, it is very simple; on a grooved sound he slits up the "posterior one-fourth of the urethral canal and about one inch of the posterior wall of the bladder," which makes the opening so large as to warrant against its closure before the ulcer is healed. Very little pain attends it and no serious danger may be anticipated, while relief is instantaneous. No possible objection can be made to the operation, as it is safe and curative. The patient is already in a deplorable condition, suffering the most intense agony; a martyr to pain, she is deprived of all diversion of company and associates, despondent and disheartened, she seeks the seclusion of her lonely bed-chamber, there to experience, day after day and night after night, the same paroxysms of anxiety and suffering, with no hope and no relief. Do not delay until the walls

of the bladder become so thickened as nearly to obliterate the cavity of the organ; in that case a failure may be anticipated, for so much injury has been done to the mucous and muscular coats as to lessen the powers of vitality and recuperation.

The objection may be raised that a vesico-vaginal fistula is obstinate and difficult to heal. This is a grave error and purely theoretical, the true difficulty being in keeping it open until the proper time for its closure.

That the artificial fistula, made in the early days of the ulcer, will not only give relief, but result in a permanent cure, is vouched for on such authority as Mr. Lawson Tait. Surely, the inconvenience of dribbling urine for four or five weeks, which is the only additional mortification to the patient, is more than outweighed by the hope and certainty of cure.

In conclusion, I earnestly recommend a careful study of this, as yet, poorly defined and almost unknown disorder, which, though local in character, tends most certainly to death, and, in its progress, inflicts tortures untold upon its victim.—*Texas Courier-Record of Medicine.*

WHEN SHOULD DIGITALIS BE PRESCRIBED ?

Bearing in mind the physiological and therapeutic actions of digitalis, it is a matter of difficulty to give the principal indications for it in the organic affections of the heart. As was pointed out last week, one of the indications for the use of the drug is the period of the cardiopathy. But before considering the question, when digitalis is useful, it is well to know when it is injurious or useless. There may be, says Huchard, a cardiac *lesion*, but still no cardiac *malady*; the state of cardiac contractility, which should regulate the employment of digitalis, is normal. In the period of eusystolism, characterized by normal and almost perfect ventricular systoles, digitalis is useless. Here hygiene should be the only treatment. Suppose we have an aortic or mitral lesion, with hypertrophy, and the attendant physical signs, with frequent epistaxis, repeated accesses of acute pulmonary hyperæmia, congested face, injected eyes, ringing in the ears, heavy head, headache and cephalic throb-

blings, vertigo, the arteries beating with violence, the radial pulse full, vibrating, resistant, and there are frequent, often painful, sometimes nocturnal palpitations, causing more or less rebellious insomnia. Digitalis is injurious in these cases, says Huchard, for the patient has entered into the period of hypersystolism, characterized by increased arterial tension, and the drug will increase his distress. Here, too, hygiene and diet are the remedies, or the bromides, aconite, and even arsenic, with perhaps leeches or venesection.

For the same reason digitalis should not be given in the first phases of what Huchard terms arterial cardiopathies. For a long time he has insisted on the capital distinction between valvular cardiopathies and the vascular or arterial cardiopathies. The latter are nothing more nor less than the localization of arterio-sclerosis on the heart, characterized by increased arterial tension, which is the cause and not the effect of the sclerosis. In the early periods of arterio-sclerosis of the heart digitalis should be employed only with the greatest reserve, since, by increasing vascular pressure, it may lead to cerebral hæmorrhages, and by it also the nocturnal palpitations are increased, dyspnœa becomes more intense, and anginous accesses may be provoked.

After the period of hypersystolism, aortic patients, less frequently mitral, pass into the period of hyposystolism or asystolism. Here digitalis is useful. It produces the best effects. But there may come a time when the effects are no longer obtained, when the systole is soft and without energy, or the cardiac cavities are distended, when there is circulatory obstruction with peripheral œdema and visceral congestions, and diuresis remains below normal. Here digitalis is injurious, and for two reasons: 1. The cardiac muscle is profoundly altered and digitalis can no more act on it than can electricity on a cut nerve. The drug here becomes an agent of prognosis and diagnosis, for it shows the existence of profound degeneration of the myocardium and of a true parietic state of its fibres (amyocardia). 2. In cardiac patients, in the subsequent alteration of the organs, there are two distinct periods: the one of venous stasis, the other of irremediable sclerotic lesions, in which cardiac drugs are given in vain. Still, in this last period caffeine in large doses may give very remarkable results.

Nevertheless, there are varieties in this cardiac paralysis, and there are degrees in this powerlessness of digitalis. The amyocardia

(cardioplegia of Gubler) may be temporary, as may be the powerlessness of the drug. It should be remembered always that *if we wish to strengthen the heart we must facilitate and lighten its work.* Before prescribing digitalis we must empty the too full venous system, and this is best accomplished by venesection, local abstraction of blood, or by repeated purgations. Want of success with digitalis does not always depend, then, upon the disease, nor upon the patient, nor on the remedy, but upon the physician; who has not placed his patient in the most favorable conditions for the action of the drug.

At an advanced period of heart disease we often find albumin in greater or less quantity in the urine. This is not an absolute contra-indication to the employment of digitalis. The dangers of the administration of active medicines in renal affections have been much exaggerated, though that there are dangers no one can deny. But they demand prudence, not the doing away with drugs. That digitalis can be safely used in these cases is probably due to the fact that it is not eliminated by the kidneys, as was shown some two years ago by Lafon. While albuminuria is not a positive contra-indication to the use of digitalis, therefore, the drug should be used with caution in these cases, in moderate doses for two or three days, and its action carefully watched.

The seat of valvular lesions is an indication as to the use of digitalis. In aortic stenosis, for example, we know that the cardiac contractions and the pulse are slow. Why, then, should we prescribe a drug that will slow them still more, and that will act very much as the malady does? By doing this we expose the patients to the dangers of digitalism. In aortic insufficiency the diastolic rest of the heart is already long enough; digitalis makes it longer and increases the already high arterial tension caused by the disease. Why add to the already injurious effects of the heart disease? asks Huchard. In mitral insufficiency it should be prescribed only in cases of great cardiac irregularity or of confirmed hyposystolism. In pure mitral stenosis it often causes bad effects. It should not be forgotten that mitral and aortic stenosis are the two cardiopathies that remain latent for a long time, and demand active treatment late. There is no doubt that in aortic affections, and especially in Corrigan's disease, digitalis is often contra-indicated for a long time: it raises arterial tension in an affection in which this is already exaggerated; by augmenting the suddenness of the systole it gives to the blood-waves violent and repeated

oscillations, which, added to the high tension, may cause cerebral hæmorrhages; it prolongs the already augmented diastolic period; finally, it contributes, by its vaso-constrictor action, towards increasing the visceral and peripheric anæmia caused by the disease. In aortic affections more than in any other it is wrong to localize the lesion at the aortic valve, and then to take no account of the localization in the treatment.

But, says Huchard, the knowledge of the orifice affected is of secondary importance only for the indication of the drug. The therapeutic indication must be found in the cardiac muscle, as has been admirably expressed by Stokes and endorsed by Laënnec. The situation of the cardiac souffle, its intensity and its absence furnish no indications for the administration of digitalis; it is the state of the heart muscle and of the vessels, their feebleness (cardio-vascular asthenia), and asystolism, that demand the use of digitalis. Let us understand what is meant by asystolism, as Huchard uses the term. There exists in all cardiac diseases a period intermediate between hypersystolism and asystolism, which Huchard calls hypsystolism. Now let us suppose a case: We have a patient in whom some months ago there were all the signs of normal or even exaggerated compensation; the præcordial shock was strong, vibrating and well limited, the apex slightly lowered, urine normal in quantity, no trace of visceral congestion and no œdema of the lower limbs. He now comes with slight perimalleolar œdema in the evening, becomes breathless easily, and has palpitations and a sensation of fulness of the chest. Examination shows slight congestion of the liver, which is painful on pressure, pulmonary hyperæmia and œdema; the cardiac contraction is soft, unequal and irregular, the cardiac impulse more extended, more diffuse, less sensible, the apex displaced, and cardiac dulness increased transversely; the first sound of the heart is more or less dull or weakened, the second a little loud in the region of the pulmonary orifice and to the right of the sternum. The pulse is feeble and undulating, the jugular veins swollen and prominent, and the urine scanty. In this case there should be no hesitation in regard to prescribing digitalis, for, says Huchard, there are three capital illustrations: feebleness of cardiac contractility, lowering of arterial and increase of venous tension, and scanty union coexisting with peripheral œdema or visceral congestions. The urine furnishes indications for the administration of

digitalis : if it becomes uratic, and falls below 800, 500, or to 200 grams a day, digitalis should be given. In giving digitalis in cardiac affections we should examine the urine as carefully as we do the thermometer in fever.

In either asystolism or hyposystolism there may be three causes of error in regard to the contra-indication of digitalis : 1. The cardiac beats may be tumultuous and violent, the impulse of the heart becoming energetic for a few moments; but examination a few minutes afterwards may show that the energetic systoles are followed by weak or aborted and precipitate ones, constituting the cardiataxic asystolism of Gubler. Digitalis should be prescribed as a tonic and regulator of the circulation. 2. We may have a patient in whom the dilatation of the heart-cavities strikes against the thin and emaciated thoracic walls, giving the false sensation of energetic and violent beats. Here the clinical error is doubled if a therapeutic error be made by withholding digitalis on account of supposed exaggerated compensation. 3. In asystolism the dilated right heart is in immediate relation with the thoracic wall; if it lie close to the diaphragm the beat may be communicated to the whole epigastric region. The extent of these beats is no indication of their force; they will be found feeble, undulating and scarcely appreciable, and digitalis should be prescribed.

To recapitulate with regard to valvular lesions : Digitalis is useless in the period of ensystolism, when the lesion is compensated; it is injurious in the hypersystolic period, when the compensation is exaggerated; it is efficacious in the hyposystolic or period of transient asystolism, when the cardiac muscle and the vessels are suffering from asthenia, and when there are œdemas, visceral congestions, dropsies, and the heart beats softly and feebly; in the period of definite asystolism or of amyocardia, when the cardiac muscle is profoundly degenerated, digitalis is sometimes useful, it may be useless, or it may be injurious. It is in these cases sometimes that caffeine in large doses gives such signally good results.

There are still other classes of cases in which digitalis is used, but the consideration of these must be deferred.—*The Journal of the American Medical Association.*

CORRESPONDENCE.

LITTLE THINGS IN MEDICINE.

(No. 3.)

Messrs. Editors North Carolina Medical Journal:

The criticism by Frederick A. Castle, M.D., of New York, on my article of the above title in the February number of the **NORTH CAROLINA MEDICAL JOURNAL**, while it is fair, frank and legitimate, is an apt illustration of that Scripture which says: "There is a way which seemeth right unto a man, but the end thereof are the ways of death."

Perhaps in no department of human thought or human learning are facts, where facts really exist, so hard to get at and so difficult of demonstration as in clinical medicine. The obsolete practice and exploded theories of former days have given way only to a mass of rubbish of equal bulk, peddled amongst the sick, not only by the quack, but by intelligent, painstaking and conscientious physicians.

This thing of rubbing quinine on the surface of the body is practiced almost universally by physicians, and they have taught it to the people. It is done in as good faith as the withholding of cold water from a fever patient was done forty years ago. Even the text-books give a sort of ironical assent to the practice. Wood, in his *Therapeutics and Pharmacology*, says the oleate "may be rubbed *ad libitum*, upon the inside of the upper or lower extremities or in the axilla."

Would he give it by the stomach *ad libitum*? He says "death has often been produced in dogs by excessive doses, and in one case the same result is said to have taken place in the human subject."

If the skin was an absorbent surface the mass of mankind would die from septicæmia—from absorption of their own filth. How is it that students of anatomy can handle the cadaver day in and day out without becoming infected? No physician apprehends danger from any amount or kind of putrescent matter so long as his cuticle remains intact. The skin is different from any other organ in the body in respect to its reconstructive metamorphosis. Its worn-out

tissues, instead of being eliminated by absorption, are simply desquamated or exfoliated. They drop off just as leaves drop off from trees in the autumn. If its own effete products cannot be absorbed, how is it possible for it to take up other foreign substances? Those medicinal substances (with, possibly, the exception of mercurial ointment) which affect the constitution by direct application to the surface, as snuff and tobacco poultices, clearly act through the nervous system, not by absorption, but by direct action upon the nerve filaments. Alcohol taken into an empty stomach is said to produce intoxication in the same manner, *before it has had time to get into the blood-vessels.*

Now, as quinine can act on the nervous system only after it is absorbed, the *modus operandi* of its action cannot be compared to that of alcohol, tobacco, etc. It must get into the circulation, and the avenues appear to be limited to the stomach and rectum. Hypodermic injections can never become popular until some means are devised to prevent its irritant action, and even if this salt was as harmless as a solution of morphine in the tissues, the hypodermic needle would be a useless annoyance if the skin would take in the remedy. What physician would depend upon rubbing morphine upon the skin to relieve pain? And why should not morphine go in as readily as quinine?

Flint, in his Physiology, says: "Looking at this subject from a purely physiological point of view, absorption from the skin, under ordinary conditions, must be very slight, if, indeed, it take place at all. Experiments on this point are not sufficiently definite to warrant any positive conclusions; but it is evident that, if any articles enter in this way, the quantity must be excessively minute."

I have long since ceased to prescribe quinine in this form, being satisfied from critical observation that it could not enter the system through the skin, and since Dr. Castle's review of my article I have made a test which, it seems to me, ought to dispose of the matter without further debate.

Amongst my patients are two delicate females, one a grown lady, and the other an eleven-year-old girl. The quiddity or idiosyncrasy inherent to these constitutions makes of quinine a violent poison. The girl cannot take any preparation of bark without the most violent constitutional disturbance, and one grain of quinine will

cause an eruption and swelling of the whole dermic surface in the other.

I had a very carefully prepared oleate made of half draehm of quinine, giving fifteen grains to the young lady, with instructions how to use it. She being well educated and very intelligent, entered into my experiment very heartily, and rubbed the whole of it well on the skin of her abdomen and inside of her lower extremities. It produced absolutely no effect except a slight tingling and redness of the surfaces rubbed.

The mother of the little girl (whose father is a druggist, and with his consent) rubbed the other portion on the abdomen of the child without her knowing what was being done. The result was considerable itching, with redness of the surfaces rubbed, and afterwards exfoliation of the cuticle, *but not the slightest constitutional disturbance*. This child, about two years ago, had an attack of intermittent fever, and came near dying from tertian ague—so dependent are we upon bark for our antiperiodics.

In the case of my own baby (two and a half years old), several years ago, with quotidian ague, I rubbed a whole ounce of quinine on the surface of her body, in every shape that quinine is used on the skin without the slightest mitigation of the symptoms. Forty grains injected into the rectum, in four doses at intervals of two hours, broke the paroxysm and cured the disease.

Cinchonism, which Dr. Castle says is so readily induced in children by this method of using the remedy, is a combination of head symptoms *knowable* only to the patient. No physician can possibly know when these symptoms occur except from the statement of the patient.

I have never known whether the head of a young child roared from quinine or not. Our only possible test is the fact of its breaking up a persistent intermittent. Our North Carolina chills will not yield to the rubbing of quinine on the surface.

The *Southern Medical Record*, published at Atlanta, Ga., kindly notices and quotes "Little Things," but, like Dr. Castle, it thinks quinine is absorbed by the skin. I quote from it: "As to quinine inunction, we think the skin does absorb a portion of the quinine when rubbed on with lard, but not less than three times the ordinary internal dose is required. Quinine with ether, alcohol or whiskey rubbed upon the skin, is more effectual, and used during the fever

will lower the temperature. My impression is that ether, alcohol, whiskey or any other evaporating lotion rubbed on the skin *without quinine* during fever will lower the temperature. Cold water assuredly will do it.

The *Record* also agrees with Dr. Castle, and objects to my mode of using the hypodermic needle. I admit that the "Little Things" amounted to dogmatic teaching without giving reasons. Possibly I presumed too much upon the powers of my medical brethren to think. I will endeavor to explain. In the connective tissue of the animal body *there are no lymphatic vessels*. (I refer to any work on physiology). Absorption is carried on mainly by the lymphatics. Even if the connective tissue was the best place to inject the hypodermic as regards pain, liability to abscess, etc., which I do not admit, it is the poorest place to get a ready systemic effect from the drug. It is said that wild hogs, in their attacks upon venomous serpents, present the fat of their jaws to their bites until exhausted of their poison, and then leisurely proceed to devour them.

Another objection to putting the needle immediately underneath and parallel to the skin, is the possibility of getting the point into a vein. The nearly perpendicular puncture would transfix the little blood-vessels coming in the way of the needle and depositing the medicament in the muscular substance, insures its more immediate absorption. The only pain connected with either procedure is in getting the needle through the skin, and the quicker this is done the less pain always. As to abscess, I have never seen but one, and that was caused from a prepared hypodermic tablet.

The *Record* prefers a quinine bottle for dry cupping the spine. One of my neighbors cupped his wife with a fruit jar. Lilliput and Brobdignag. If I wanted to produce an *ecchymosis* I might use a quinine bottle, but for its neurotic or revulsive action I decidedly prefer the coffee cup.

In dry cupping the spine you want surface more than depth to your instrument.

N. B. HERRING, Wilson, N. C.

SIX CHILDREN AT A BIRTH.—Dr. Vassali, of Lugano, reports the case of a woman that gave birth to six children at one time, about the 115th day of pregnancy. There was only one placenta. The mother had previously given birth to seven children in two labors.—*Journal of the American Medical Association*.

DIETETICS IN TYPHOID FEVER.

Messrs. Editors North Carolina Medical Journal:

On reading an article in the April number of the NORTH CAROLINA MEDICAL JOURNAL on the treatment of typhoid fever in the hospitals of New York, Boston and Montreal, I was impressed with the precision in time and quantity with which nourishment was administered, and that this nourishment consisted principally of milk. Now, I firmly believe that excessive temperature and many other disagreeable symptoms that arise in the course of a case of this fever are as much due to over-feeding as to any other one thing that can be mentioned.

Fothergill graphically describes the condition of the alimentary canal of typhoid patients in these words: "There is also a brown chapped tongue, well retracted, the brown fur consisting of an accumulation of dead, epithelial scales, significant of the condition of the whole intestinal canal with brown sordes on the teeth of similar origin accompanied by the formation of crusts on the lips."

Now, here we have an alimentary canal in a dry parched condition, all the secretions held in abeyance, the dead epithelial scales making it hard and glossy (or at least the parts that are open to inspection). The sensibility of the nerve endings are obtunded, especially those of the special sense of taste and smell, the power of absorption is greatly lessened. Brunner's glands and Peyer's patches are swollen and tender. Now we give milk for nourishment, but does it nourish? I can't help thinking that it does not. What does it do? It passes through a buccal cavity devoid of salivary secretions, enters a stomach whose flow of gastric juice has been materially lessened, if not altogether stopped. After it has remained here for a longer or shorter period, almost wholly unacted upon by the gastric secretions, therefore virtually as an offending body it is probably passed or washed into the intestines by the next drink of water or milk. Well, as this is kept up steadily every two hours by day, and, as described in one hospital, every three hours by night, we can easily imagine why the bowels become full of gas and the abdomen tense, with a tympanitic resonance. The curds hard and abundant, irritate the tender glands of the intestines and cause pain in the stomach in its feeble efforts to digest them.

Now, assuming that these conditions are all true (as I believe them to be, and not overdrawn, as I believe them not to be), what must be the result when milk is given, as much as the patient can or will drink, as done in one case mentioned, and six ounces, as mentioned in another case, every two hours?

Tympanites, constipation or diarrhœa, high fever, delirium and coma, all of which are to be treated according to the most improved methods. Antipyrin, antifebrin, naphthaline, etc., etc., to reduce temperature, turpentine for the tympanitis, calomel for the constipation, opium for the diarrhœa, etc., all of which, one and another, if all were perfectly harmless in themselves, taken with the water, that is absolutely necessary in those cases, would keep the poor fever-stricken patient, with his mouth always open ready to swallow pill or potion, and as these patients are more or less in a semi-comatose state, the effort necessary to arouse them so often and sufficiently, must be a great source of irritation. Who has not noticed with a feeling of the deepest sympathy the exhausted and panting condition of the poor delirious patient when aroused to take his regular dose of milk or other physic in many cases equally as bad. After gulping it down, more wind than fluid, he will lay back and pant for sometime before breath is regained. Now, of course, this is all tending toward a rapid destruction of the vital powers.

As milk is a liquid aliment containing all the elements necessary to nutrition, what can we use as a substitute? or what can we do with milk to make it more acceptable to the stomach of a patient in this condition?

In the first place, I think that a great deal can be done to the alimentary canal. I have often given glycerin with the most happy results in typhoid fever and in other fevers with a typhoid condition; glycerin being one of the very best solvents we have, softens the hard, dead epithelial scales that are caked upon the tongue, lips, teeth, and, in fact, to a greater or less extent, throughout the whole alimentary canal. In many cases where glycerin is taken into the mouth and a teaspoonful given to swallow several times a day, this coat is softened, the tongue and teeth become clean, the lips become more and more pliant and soft, and are enabled to grasp the vessel that conveys the food, and the patient does not gulp down such excessive quantities of wind. Then again, what is taken is more

readily absorbed, provided, of course, that it is not taken in such conditions and quantities as to cause excessive fermentation. Now, place a healthy man in bed and keep him there on a pure milk diet, six ounces every two hours, and I am of the opinion that it would be only a question of a short time before he would be the subject of a severe gastric or intestinal disorder. Yet a sick man is expected to take this and thrive.

Why give milk in its natural state at all. I have no doubt that cow's milk, pure and simple, is a fine food for calves, but I doubt if it is for babies or sick people. Koumiss in small quantities and repeated at regular intervals, not only gives all the nourishment that milk can give, but the alcohol that has been formed in the process of fermentation, acts also as a good stimulant and tonic. Then we have barley flour, which, when made into gruel and mixed equal parts with milk, or, better still, with milk and Seltzer, makes a splendid food. We have also beef peptonoid, solid and liquid, which, when added to meat broths, make them very nutritious. The greatest watchfulness being exercised to avoid over-feeding. A point I would insist upon is giving them more cold water, or, better, pounded ice, than is usually given, and less food. It would, in my judgment, be found that much less medicine would be required to relieve the various symptoms, which I believe in many cases are produced, or at least intensified, by the ingestion of quantities of food that cannot possibly be digested. Plenty of fresh air, sunlight and water and a little food are Nature's remedies, and it is a hard task to beat Nature. I do not pretend to be putting forth anything new or novel in the treatment of this old, and, in many cases much treated fever, and I am not unaware of the fact that the subject has been fully discussed by some of the most eminent men in our profession, and particularly by that great and glorious light, Dr. Roberts Bartholow, of Philadelphia. But my individual experience has been since I discarded an extensive milk diet (whether that was the cause or not) that I have been troubled very little with excessive temperatures or very troublesome tympanitis, or, at least, to that extent that called for special treatment by antipyretic agents or carminatives, and troublesome diarrhœa has not been a special feature in my cases, and, as a result of good fortune or otherwise, I have never had a case of perforation of the bowels. I have attributed the good results to the method of feeding. Perhaps I

may be wrong, and may yet be doomed to sad disappointment, but the method to me seems rational and worthy of extensive trial.

The only excuse that I have to render for presenting this paper is that I consider the dietetic treatment of all fevers, and of typhoid fever especially, of such importance that a thorough study and exchange of views upon the subject can only tend to the good of our patients.

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210 Pa. Ave., Washington, D. C.

NORTH CAROLINA GRADUATES OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF VIRGINIA IN 1888.—A. Anderson, Wilson; W. F. Faison, Clinton; C. D. Hill, Faison; R. D. Jewett, Wilmington; T. S. McMullan, Hertford; J. W. Tayloe, Winston.


THE PATHOLOGICAL AND HISTOLOGICAL SLIDES.—We received in time for the Fayetteville meeting thirteen microscopic mounts from Dr. James E. Reeves, of Chattanooga, Tenn., but had no opportunity to exhibit them. Since then we have had time to examine them, and desire to say that they are excellent. Here is the list of slides above referred to: Bacillus of Typhoid Fever; Hard Cancer of the Breast; Cross Section of Bat's Wing; Vertical Section Eight Week's Embryo; Bacillus Tuberculosis from Sputum; Lung Tissue, Hyaline Degeneration; Entozoa Liver of Rat; Liver, Kidney, Lung, Spleen and Stomach; Congo Eel; Anthrax Lung of Rabbit; Small Granular Kidney (waxy); Spermatozoa Testicle of Rat; Large White Kidney (waxy); Epithelioma of the Cheek. To beginners with the microscope it is all important that they should have type specimens, for as useful as such books as Beale's "Microscope in Practical Medicine," and his "How to Work," and several others may be, nothing can be as good as a well stained and mounted specimen from the hand of such an expert as Dr. Reeves. Send to him for a list of his mounts—we are sure that the price will not be an obstacle to purchase.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
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THOMAS F. WOOD, M. D., Wilmington, N. C., }
GEO. GILLET THOMAS, M. D., " } Editors.

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

BOARDS OF HEALTH SHOULD HAVE EXECUTIVE POWERS.

Southern Atlantic towns are having great anxiety now on account of the appearance of yellow fever in Florida. The wildest rumors prevail, bringing the masses into almost a condition of panic. Appeals are made to Boards of Health for information as to the proximity of disease, and complaints are poured into the ears of members of the Board, especially into those of the Superintendent of Health, as to the sanitary delinquencies of the informant's neighbors or those of the corporation. In the monotonous times when

no threatenings of disease lower over their heads, many of these half frantic complainants would allow a notice for the "Abatement of Nuisances" to be served upon them with complacency, and perhaps treat the sanitary inspector who served it with the same sort of disrespect that one would expect if he were about to settle a private personal quarrel. But now danger has loomed up, and the Board of Health (to them) seems to be troubled with the same lethargy that the Board found in them when health reigned supreme. Demands come for action, and the silent mutterings go forth that if the Board don't act they will set up a "shot-gun quarantine" and "tear up the railroad." The Board must form a sanitary line of battle in presence of the enemy, whether or not their ranks are filled, their ammunition sufficient, or a plan of campaign determined upon.

Now, what is the actual state of things? Why, the Superintendent of Health is charged with maintaining an "inland quarantine" (in contradistinction with maritime quarantine, which latter is under separate control), and the expenses must be borne by the city or county in which the emergency arises. This provision makes it necessary for the Superintendent to borrow executive authority from the city or county in which he acts, and the loss of time and motion between the asking and the granting of material aid, causes dangerous delays, begets indecision, and the battle array which the excited public looks for slowly organizes, and is, at best, but a feeble line. Fortunately, the stimulus of fright brings public-spirited citizens to the front, and a very good line of militia organizes, but unfortunately, they only stand up as long as they have the stimulus of danger. Sanitarians are thankful for this much, for nearly all that has been done in this country towards building up health boards has been done by necessities of the times. The great epidemic of yellow fever in 1878 gave birth to the majority of State Boards of Health.

But what we started out to emphasize is, that all executive authority ought to be invested in the Superintendent of Health, not only during the threatening of epidemics, but during "piping times of peace." The selection of proper persons for sanitary inspectors, the condemnation of public and private nuisances threatening public health, the isolation of persons sick with pestilential diseases, the organization of hospital facilities in an emergency, should be in his

hands, and he should be held responsible for the proper performance of his duties by the County Board of Health.

Now is the time for proper reflection on this subject, and we suggest that the threatenings of dangers which now surround us may help us to formulate some reasonable and practicable statute bestowing executive powers.

Those interested in this subject will see what the provisions of the law are by consulting the law Code, Sections 2883 and 2909. The first named Section has been revised by eliminating a fine of \$25 for its violation, and placing the fine at the discretion of the Court for misdemeanor.

EVIDENCE OF THE CURABILITY OF PHTHISIS.—Dr. Vibert, who is connected with the Paris morgue, has stated that among 200 necropsies which he made on persons who died violent deaths, he has in as many as 20 per cent. found evidence of old tubercular disease.—*N. Y. Medical Record*.

"LOW WINES" from distillation of pine leaves has an especial value in treating some forms of eczema of the hands. There are several products of this sort, but the one referred to is that produced in the "wet" distillation of oil from the pine leaves. When cold it is a turbid mixture, pine oil suspended in a slightly acidulated water, having nearly the odor of nutmeg. It relieves the itching and the swelling in many, and now and then makes a cure, when the general functions of the body are corrected.

THE BACILLUS OF DYSENTERY.—Chantemesse and Vidal report the presence of bacilli in the intestines and their contents, and in the spleen and mesenteric glands of dysenteric patients. The microbe develops rapidly on gelatine, in bouillon and in water; it is colored with aniline only with difficulty. Rabbits inoculated with cultures of the bacillus and by intro-peritoneal inoculation developed the lesions characteristic of dysentery. Peritonitis, pericarditis and fibrinous pleurisy were developed after intra-peritoneal inoculation with the bacilli.—*Revue de Clin. et de Ther.*

REVIEWS AND BOOK NOTICES.

AN ILLUSTRATED ENCYCLOPÆDIC MEDICAL DICTIONARY, being a Dictionary of Technical Terms Used by Writers on Medicine and the Collateral Sciences in the Latin, English, French and German Languages. By Frank P. Foster, M.D., Editor of the *New York Medical Journal*, with the Collaboration of [ten doctors of Medicine.] Vol. I., with Illustrations. New York: D. Appleton & Co., 1, 3 & 5 Bond St., 1888.

The medical profession will welcome this dictionary as a timely help in the definition of words, especially for German and French terms. Before this volume came out the dictionary-holder had to contain Dingleton, Thomas, Cutler's "German Terms," a Latin and Greek Dictionary, and a Worcester or Webster's unabridged, with *Index Medicus*, and Neale's Digest, to make good measure, and then come off a track of a word beaten and disgusted with new-fangled inventions of the word-makers.

The author says: "The vocabulary is intended to include all strictly medical terms that have become current at any period in our medical literature, and a few have been given that cannot be said to have gained currency—the latter being inserted, in most instances, on account of their having been used by well-known writers, * * * it has not been thought best to omit any words merely on account of their being obsolete, partly because many such words throw more or less light on the origin and primitive meaning of terms still in common use, but mainly because it can hardly be said of any word now considered obsolete that it will not shortly come into vogue again."

It differs from all the Medical Dictionaries now before the public, at least as far as we are acquainted with the American press, in the amplitude of its scope. It is more like Littré's masterly volumes than like Worcester or Webster, and the typographical execution calls to mind the beautiful work done in the "*Index Catalogue*" and "*Index Medicus*."

Dr. Foster's position as editor of one of the leading medical journals of the country, was a good school in which to learn the needs of the students of the profession, and his knowledge of the literary ability of his confrères put him in a position to select such aid as would bring

his work to a successful issue. This first volume indicates his literary acumen in selecting his editorial staff and his methods of research, for, according to his statement in the preface, the huge undertaking was begun only seven years ago.

What will strike a reader in this volume, after admiring the clear typography and handsome pages, will be the immense number of new words. A perfect wilderness of dead words, but just such skeletons as sometimes lead us across a literary desert to the oasis.

This volume came to us as a great surprise. There had been no heralding of its approach, as would very well have become its author and publishers, and recovering from the surprise we will settle down to its perusal, that, by the time the other three quarto volumes of 750 pages are done, we will have some more words. The volume is sold only by subscription.

PTOMAÏNES AND LEUCOMAÏNES ON THE PUTREFACTIVE AND PHYSIOLOGICAL ALKALOIDS. By Victor C. Vaughan, Ph.D., M.D., and Frederick G. Novy, M.S. Philadelphia: Lea Brothers & Co., 1888. Pp. 316.

It has been only three years since the basic compounds resulting from animal decomposition, known as ptomaines, have attracted the general attention of the profession. Investigations were begun upon these interesting substances early in the present century. To Panum, whose first contributions were published in Danish, is due the credit (1856) to a most important contribution, and the distinguished investigator lived to receive the credit and honor due him. From that time to the present date chemists have been busy in determining the nature and reactions of substances isolated from the fluids of putrefaction, the volume before us giving us a list of 43, some of which are doubtful.

The leucomaïnes are "basic bodies found in the living tissues, either as products of fermentation changes or of retrograde metamorphosis," and are divided into two groups—the Uric Acid and the Creatinine Group.

There is a table in three parts, giving the chemical reactions at a glance. Besides the very interesting chemical facts, the authors point out the pathological importance of leucomaïnes, calling attention to the fact that, while the profession is very busy studying infectious diseases, it has too much neglected a large and important class of ailments which arise within the body itself, and which may be called

antogenous. Brunton, they say, is of the opinion that the condition which we term "biliousness," and which is most likely to exist in those who eat largely of proteids, is due to the formation of poisonous alkaloids, and they think that ordinary colds are best explained by the supposition that certain effete matters, which normally excreted by the skin, are retained. This is borne out, they say, by the effects on the nervous system, and by the fact that the only successful methods of treatment are essentially eliminative.

The study here presented is big with future developments, and this is the first opportunity of viewing the subjects in a connected whole, a privilege which the thinking portion of the profession will take advantage of.

COMPARATIVE STUDIES OF MAMMALIAN BLOOD: With Special Reference to the Microscopical Diagnosis of Blood Stains in Criminal Cases. By Henry F. Formad, B.M., M.D. Sixteen Illustrations from Photo-Micrography and Drawings. Philadelphia: A. L. Hummel, M.D., Publisher, 224 S. 16th St., 1888.

We desire to express our acknowledgments to the author of this volume for our copy. There are only 61 pages of text, but the importance of the subject and value of this treatise must not be estimated by its size. Every one knows that Dr. Formad is an expert microscopist, and many of us who are experts know how difficult it is to reconcile the diverse writings on the comparative appearances of the blood. The author has given us original work and original illustrations, and as we read we feel that we have at last a substantial foundation for medico-legal opinions in reference to the comparative appearances of blood and all the questions involved. We particularly recommend it to the new Microscopical Society as an aid to study. We presume that a limited number of this book can be obtained from the publisher, although the price is not known to us.

A CLINICAL ATLAS OF VENEREAL AND SKIN DISEASES, INCLUDING DIAGNOSIS, PROGNOSIS AND TREATMENT. By Robert W. Taylor, A.M., M.D.

The publishers have sent us two fasciculi of this very handsome work, which we have examined with pleasure and admiration. The pages measure 14x18 inches, the paper is beautiful, the type new

and clear, and the margins tastefully ornamented with red lines. Parts I. and II. treat of Venereal Diseases. Part I. has 115 pages of text and nine full-page plates with numerous figures, in the best style of chromo-lithography. Part II. has 25 pages of text and seven full-page plates. We are becoming so used to elegant book-making in this country that we are apt to underestimate the large outlay necessary to produce such works as this atlas. The price to the reader is remarkably low, this whole work being offered at twenty dollars, that is to say, eight parts at \$2.50 a part. Compared with the most elegant work of the kind in our day, Hutchinson's *Illustrations of Clinical Surgery*, the price and general execution compare very favorably.

The text is written carefully, and abounds in practical details well suited to every day use. We have only time for this short notice, but will have more to say next month. The work is sold only by subscription, and we can heartily recommend it.

ATLAS OF THE VENEREAL AND SKIN DISEASES. By Prince A. Morrow, A.M., M.D. Fasciculi VI. and VIII.

We have noticed from time to time the issues of this superb work. The pages are $13\frac{1}{2} \times 17$ inches, of handsome paper and beautiful typography. The plates are full-size, having from two to four figures on them, and are all artistically colored, each fasciculus containing five. The illustrations are selections from the portfolios of the most renowned specialists—Kaposi, Hutchinson, Neumann, Fournier, Ricord, Vidal and others abroad, and Morrow, Otis, Hyde and Piffard in the United States, affording a gallery of skin diseases of a very remarkable character. These fasciculi make regular visits to our office, and will be a most valued part of our consulting volumes.

The work is published by William Wood & Co., 56 & 58 La Fayette Place, New York, for \$2.00 a part, and will be complete in 15 parts.

A NEW WAY OF TRAINING NURSES. By A. Worcester, A.M., M.D. Boston: Capples & Hurd.

Here are three essays collected in this booklet, the first having the above title, the second "The Training of Nurses in Private Practice," and the third "History of the Waltham Training School for

Nurses," with an appendix giving the rules and regulations for the government of nurses in training. It gives for 50 cents such valuable suggestions as some of us are just now looking for. We must have training schools in connection with all the hospitals in our towns, to provide for the demand which is pressing on us yearly. Either we must train our own women, or be overrun with strangers, and experience with the latter has so far not been satisfactory.

A MANUAL OF THE MINOR GYNECOLOGICAL OPERATIONS. By J. Halliday Croom, M.D., etc., etc. Revised and Enlarged by Lewis S. McMurty, A.M., M.D., with numerous illustrations. Philadelphia: Records, McMullin & Co., 1888.

This is a well printed and illustrated short hand-book on the all-popular subject of gynecology. The medical public seems never to tire of the surgery of the female genitals. The announcement of the demonstration of a new operation for torn cervix or anything else of that sort, would empty a hall, if in the same building and at the same time of a lecture on any other subject by the most interesting lecturer. It is almost a craze, but seems not to have reached its flood-tide. Therefore such books are bought, and this one seems to be a fair example of a condensed treatise.

THE BEST SURGICAL DRESSING. How to Prepare it and How to Use it, with a Consideration of Beach's Principle of Bullet-Wound Treatment. By Otis K. Newell, M.D. Boston: Cupple's & Hurd, 1888. Price \$1.00.

This little book is all about iodoform for a surgical dressing. It is beautifully printed. "Beach's principle" seems to be to, let bullet's alone, and not probe after them, without one is prepared to perform a laparotomy on the spot in case of wound of the abdomen.

ATHOTHIS: A Satire of Modern Medicine. By Thomas C. Minor. Cincinnati: Robert Clarke & Co., 1887.

We noticed this bright little book on a previous occasion. Within its pages (Chapter IX) are contained extensive bibliographies, which shows the author to be a man of extensive reading, and these are deftly woven into a pleasant narrative. This is an interesting book for summer reading, and will be enjoyed by those having the leisure.

CURRENT LITERATURE.

DRINKING HABITS AND LONGEVITY.

The English alone seem to successfully prosecute the work of collective medical investigation. The most recent report is one prepared by Dr. Isambard Owen, on "The Connection of Disease with Habits of Intemperance." This report embraces an analysis of four thousand two hundred and thirty-four cases, contributed by one hundred and seventy-eight physicians. Each schedule gives the social position or occupation, age at death, and cause of death of the different persons.

They are also classified as regards their drinking habits into, A, total abstainers; B, habitually temperate or moderate systematic drinkers; C, careless drinkers; D, free drinkers; E, decidedly intemperate. When doubt existed as to which class a person belonged, he was placed between, under the head of AB, or BC, or CD, etc. The habits of the different classes of society; second, as to the longevity of those who drink and those who do not; third, as to the cause of death.

The following is a summary of the conclusions given :

1. That habitual indulgence in alcoholic liquors beyond the most moderate amounts has a distinct tendency to shorten life, the average shortening being roughly proportional to the degree of indulgence.

2. That of men who have passed the age of twenty-five, the strictly temperate, on the average, live at least ten years longer than those who become decidedly intemperate. (We have not in these returns the means of coming to any conclusion as to the relative duration of life of total abstainers and habitually temperate drinkers of alcoholic liquors.)

3. That in the production of cirrhosis and gout, alcoholic excess plays the very marked part which it has long been recognized as doing; and that there is no other disease anything like so distinctly traceable to the effects of alcoholic liquors.

4. That, cirrhosis and gout apart, the effect of alcoholic liquors

is rather to predispose the body toward the attacks of disease generally than to induce any special pathological lesion.

5. That in the etiology of chronic renal disease, alcoholic excess, or the gout which it induces, probably plays a special part.

6. That there is no ground for the belief that alcoholic excess leads in any special manner to the development of malignant disease, and some reason to think that it may delay its production.

7. That in the young alcoholic liquors seem rather to check than to induce the formation of tubercle; while in the old there is some reason to believe that the effects are reversed.

8. That the tendency to apoplexy is not in any special manner induced by alcohol.

9. That the tendency to bronchitis, unless, perhaps, in the young, is not affected in any special manner by alcoholic excess.

10. That the mortality from pneumonia, and probably that from typhoid fever, also, is not especially affected by alcoholic habits.

11. That prostatic enlargement and the tendency to cystitis are not especially induced by alcoholic excess.

12. That total abstinence and habitual temperance augment considerably the chance of a death from old age or natural decay, without special pathological lesion.

As regards occupation and drinking habits, it appears that the most temperate classes are the professional, clerical and farming. The persons of most intemperate habits are licensed victuallers, drivers, soldiers and domestic servants. The independent class rank low, showing that idleness begets intemperance.

The committee's report has an appendix containing the results of a similar inquiry made by Mr. Neison forty years ago, and one made by the Harveian Society 1879 and 1880. Mr. Neison showed that the mortality-rate among the very intemperate was about five times the general rate. He also found that the intemperate use of spirits was more hurtful than the like use of beer, but that immoderate indulgence in both was more injurious than the exclusive use of either. "Mechanics, working and laboring men," according to his figures, withstood the effects of intemperance better than "traders, dealers and merchants," the latter better than "professional men and gentlemen," and all better than women.

The Harveian Society reported that they had reason to think that in London the mortality, among any considerable group of intem-

perate persons, will differ from that generally prevailing among adults in the following important particulars—namely, a fourfold increase in the deaths from disease of the liver and chylopoietic viscera; a twofold increase in the deaths from disease of the kidney; a decrease of half as much again in those from heart disease; a marked increase in those from pneumonia and pleurisy; a considerable increase and an earlier occurrence of those from disease of the central nervous system; a marked decrease in those from bronchitis, asthma, emphysema and congestion of lungs; a decrease nearly as great in those from phthisis, and a later occurrence, or at least termination, of the disease; a very large decrease in those from old age, with an increase in those referred to atrophy, debility, etc.; and the addition of a considerable group referred in general terms to alcoholism or chronic alcoholism, or resulting from accidents.

The committee's conclusions under this head roughly correspond with those of the Collective Investigation report as regards disease of the liver, kidney and nervous system, and also as regards old age and phthisis, but not as regards diseases of the heart, pneumonia, bronchitis, etc., "atrophy" and debility.

There are, according to Dr. Owen, no statistics aside from his own giving the result of a comparison between the longevity of total abstainers and moderate drinkers.—*Medical Record*.

RADICAL CURE OF PTERIGYUM.

My plan is to tear off the apex of the pterigium from the surface of the cornea; and if any small portions should remain adherent, to shave them off carefully with a cataract knife. It is better, even, to cut into the proper substance of the cornea, removing a small portion of unimplicated tissue, than to leave even one abnormal connective tissue fiber on the surface; for this will certainly undergo persistent contraction. The next step in the operation is to divide the normal from the abnormal connective tissue fiber along the margins of the morbid growth, down to the base. Then seizing the apex of the growth with the forceps, the loose connective tissue which holds it to the surface of the ocular fascia may be severed

scissors. A free flow of blood should be regarded as auspicious. The conjunctiva may then be stitched together, and a circular incision made both above and below, corresponding to the corneo-scleral junction, for the distance of a quarter of an inch from the line of union sought to be established by the sutures. Radiary incisions should then be made in the vertical meridian sufficiently to allow the ocular conjunctiva to stretch freely over the surface without having it thrown into folds. Incisions may be made at right angles to the line of union at the base of the pterigium, to relieve tension at this point. The pterigium itself should be allowed to lie undisturbed in its basillar attachments. The sutures will come away from the conjunctiva in three or four days at most, when good union will be found to have occurred along the whole line, while the pterigium itself undergoes rapid shrinkage, and disappears by the resorption of its constituent elements. This character of operation may be applicable to all forms of pterigya. Having practiced the operation for more than fifteen years, and never having witnessed a return of the growth at the site of its original development, I am persuaded this method is entitled to rank as a radical cure of pterigya.—*Dr. D. S. Reynolds in Progress.*

GLYCERINE applied in a thin film over the surface of mirrors to be used in cavities prevents them from becoming dim.

GLYCERINE AS A MEANS OF CAUSING IMMEDIATE ACTION ON THE BOWELS.—A drachm of glycerine injected into the bowels will produce an evacuation in half an hour. It may also be conveniently inserted in a suppository.

THE YELLOW FEVER ALARM is dying out, and the public is being assured that everything is being done for the prevention of the spread of the disease. If sanitarians could get ten per centum of this scare distributed through the entire year, we would see some clean cities on the Atlantic coast. A great deal has been done, but it will be abandoned as soon as the fright is over, and the health officers will have to go through the same old drag in keeping up work begun, and will be but minor personages in the community until another alarm is sounded.

NOTES.

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION will hold its first annual meeting at Birmingham, Ala., on September 11, 12, 13th. We presume that there will be delegates from this State.

A GOOD ANTISEPTIC FORMULA, disguising considerably the odor of iodoform, is as follows: Iodoform $\frac{3}{4}$ i, boric acid $\frac{3}{4}$ ij, glycerine $\frac{3}{4}$ ss. For otorrhœa and for dressing ulcers it is applicable.

M. S. MOORE, M.D., Fordyce, Ark., writes: "I have tried Lactated Food in a low case of typhoid fever, where the stomach would retain nothing else. The food was retained and the patient made a good recovery."

FAILURE OF GLYCERINE TO PRODUCE MOVEMENT OF THE BOWELS.—The writer of this had occasion to try, for the first time, the injection of glycerine to evacuate the bowels. The patient had been sick for nearly two years, but was taken on the day of its administration with hæmatemesis. A glass male syringe was filled with glycerine, passed well into the bowel without effect in an hour, when a similar dose was repeated, but without effect. The patient died that night. Its failure may have been due to the rapidly ebbing life. A drachm of glycerine is said to be enough and this can be easily administered in a capsule or suppository.

DR. JOHN B HAMILTON ON DR. GARNETT.—"He was engaged in active practice when the War between the States came. Who shall censure him now, that he followed the fortunes of his State, rather than those of the old flag? Dr. Garnett always acted true to his convictions of right, as the needle to the pole. Others might scold, sulk and backbite, if they wished, and remain under the protection of the flag while in enmity to its defenders, but not he. Business, property, peace and comfort were exchanged for the hardships of the camp, the battle-field and the retreat, because his convictions of the righteousness of the Southern cause forced him into the front. Brave, honest and true Dr. Garnett! No Northern soldier but honors his hatred of hypocrisy and his courage. The war ended, his antagonisms died, and his practice was resumed with success, and the reward which none envied and all approved."

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THOMAS F. WOOD, M. D.,
GEO. GILLET THOMAS, M. D., } Editors.

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ORIGINAL COMMUNICATIONS.

ON THE IMPORTANCE OF THE EARLY DIAGNOSIS AND TREATMENT OF NASAL POLYPI.

By KEMP P. BATTLE, Jr., M.D., Surgeon for Diseases of the Eye,
Ear, Throat and Nose to St. John's Hospital, and to that of
the Leonard Medical School, Raleigh, N. C.

(Read before the Medical Society of the State of North Carolina, at
Fayetteville, May 8, 1888.)

It is well known that the study of the nasal cavities was one of the last to receive special attention in the medical world. Our knowledge of other regions of the body, their diseases and the best methods of treatment, was long far in advance of that of the nose. In our colleges this subject was neglected, and if the student were given opportunities for special study in any particular branch of medicine, it certainly was not this. The reason for this was that

the leaders of the profession themselves had little to teach. For many years, however, a change has been taking place. Rhinology has made rapid advances. The recognition of the frequent, though invariable, necessity for surgical rather than medical treatment began a new era, and the introduction of electricity, the invention of new instruments and apparatus, and, above all, the appearance of cocaine, have revolutionized the subject. In consequence of these advances the treatment of most nasal affections is far more effective and satisfactory than formerly, notwithstanding the fact that uncalled-for operations by a few enthusiasts may have given rise to the reactionary cry that the nose is now a much-abused organ.

It is not my purpose to weary you with a discussion of the whole subject of nasal polypi—the different varieties; their etiology, symptoms and the various methods of treatment; but I desire to direct attention especially to one point, and that is the great advantage to be derived from an early recognition of the presence of polypi in the nasal cavities. The dangers of delay in dealing with malignant or semi-malignant growths are terribly disastrous, but these are fortunately comparatively rare, and I shall confine my remarks to the more common varieties.

All will admit that this region is commonly more neglected than any other in the body. When patients suffer from nasal symptoms caused by a polypus they generally refer the trouble to a cold, regard it as the inevitable lot of frail human nature, and allow it to go on week after week or month after month unexamined and untreated. Or else they conclude that they are the victims of "catarrh" and join the ranks of those who enrich the catarrh quacks. If a polypus is sought for and found while still small, its removal is accomplished with comparative ease, and if necessary its site may frequently be cauterized with the confident expectation that a recurrence will be prevented. Usually, however, the case is neglected until the respiration and voice become affected and the patient is forced to apply for relief. The nasal cavity is then more or less completely plugged, often on both sides. Instead of one there may be many, and they may have grown to such an extent as to appear in the pharynx below the palate or at the anterior nares. Thorough extirpation is now comparatively difficult or in some cases impracticable—treatment is far more troublesome to both

patient and surgeon, and it may be impossible to prevent their return.

As illustrating these remarks very forcibly allow me to present the evidence of four cases selected for the purpose from a number of like character in the practice of my associate, Dr. Lewis, and myself. The first is that of a woman, aged twenty-one. She first noticed that something was the matter with her nose ten months before applying for treatment. There was some hypersecretion and a gradually increasing interference with respiration through one nostril. When I saw her all breathing through the left side had become stopped. With the head mirror and nasal speculum alone nothing could be seen, but, after throwing in a spray of a four per cent. solution of cocaine for half a second, the turgescient mucous membrane contracted, the calibre of the cavity was enlarged and a growth could be detected blocking up the passage near the posterior nares. The use of a probe showed that it was polypoid in character and globular in form, and that it grew from the inner aspect of the inferior turbinated bone near its posterior extremity. Its size was reduced somewhat and the surrounding parts made anæsthetic by a twenty per cent. solution of cocaine applied by means of a small mop of cotton on the end of a cotton-holder. The platinum wire loop of a snaring apparatus connected with a galvano-cautery battery was passed around it without difficulty and drawn tightly about the pedicle close to the bone. The electric circuit was then closed, the loop heated and the growth cut off with the loss of only a drop or two of blood and with scarcely any pain. Breathing was now as free on this side as on the other. Treatment was here delayed longer than it should have been and was employed none too soon; but this case furnishes a marked contrast with the following, both as regards the results of neglect and the methods of treatment.

The second case was also a woman, aged thirty. This patient I first saw in consultation with Dr. A. W. Knox, under whose care she then was. At that time both nasal cavities were completely stopped. Nothing could be seen on the right side from in front, but on the left side a polyp could be easily seen, without a speculum, filling the cavity almost as far forward as the external opening. The most urgent condition of things, however, was in the pharynx. There was a mass of polypoid tissue so filling the upper pharynx as to block up both posterior nares, lie in close contact with all the

pharyngeal walls, displace forwards the velum palati and protrude a half-inch below its free edge. Respiration could still be carried on with comfort through the mouth, but deglutition was a difficult matter. Whether the polypus seen in the nose was a part of the larger one behind we could not decide, nor could we determine the exact point of origin of the pharyngeal growth; but careful examinations with a probe in the nasal cavity and afterwards with the finger in the pharynx, showed that it had probably grown from some point on the outer wall of the left nasal cavity and had pushed its way backwards into the pharynx and then downwards. This afterwards proved to be the case. Using my battery and apparatus, Dr. Knox skilfully removed the greater part of the growth in one piece. Employing a Bellocque canula, he introduced a piece of narrow tape through the more obstructed side of the nose close to the septum, then, releasing the spring of the canula, its end bearing the tape, appeared in the back of the mouth. This end of the tape was then drawn out of the mouth, leaving the other end hanging from the nostril, as in the ordinary operation of plugging the posterior nares. The loop of the snare was then fastened to the end in the nostril and pulled through the nose into the pharynx. The tape was then removed, and, with the aid of the finger in the mouth, the loop was passed around the lower end of the growth and drawn up on the pedicle as far as possible. The wire was then heated by passing the current and the pedicle cut through. The part thus cut off was removed by forceps through the mouth and measured one inch in thickness, one and one-fourth inches in breadth and two inches in length. From the plugged condition of the entire nasopharynx the loop could not, of course, be carried as far towards the point of attachment as was desired, and the thick stump of the pedicle was left protruding a short distance from the posterior nares. The left side of the nose was still choked, but the right side was free for breathing purposes and the pharynx was empty. The most annoying part of the trouble had been removed, and further manipulations were deferred to another sitting. Cocaine was used in this case, as usual, and the pain and bleeding were trifling in amount. Dr. Knox afterwards turned the case over to me, and by repeated snarings I succeeded in clearing out the cavity entirely. More than twelve months later I saw the patient again and made an examination. There had been no return of the growth and she could

breathe freely through both sides of the nose. Her voice was natural, and, as she said, she hardly felt like the same person who had been so annoyed for so many years. Two years before applying to us she had consulted a well known physician and he had attempted to tear away the growth with forceps in the time-honored way. Very naturally he could remove only parts of it, and there was comparatively great pain and profuse hemorrhage, and she thinks that the operation was followed by swelling and that her condition became worse than before. One year afterwards she was treated by another capable doctor, but in the same way and with the same result.

The third case was that of a gentleman, forty years of age, who complained of a more or less continuous watery secretion from the nose. He thought he had a slight catarrh, and was quite astounded when informed that he had a nasal polypus. It grew from a broad base along the edge of the inferior turbinated bone, lay in contact with the septum and filled a large part of the space of the inferior meatus. There was little room, however, above this for the passage of air, and so the presence of a growth of any sort had not been suspected. As is frequently the case, the whole growth could not be removed with one snaring, and it was taken away in pieces, the largest measuring three-eighths of an inch by one inch. The line of origin was cauterized by a small platinum knife heated by electricity, and a year later there was no sign of a recurrence.

The fourth case again is in striking contrast with the third, and again shows the effect of delay and neglect. The patient was a man, aged fifty. He had had the affection for twenty-three years, and one side of the nose had been operated upon by a prominent surgeon of Baltimore twelve years before I saw him. At that time the forceps was used, and as the action of cocaine in controlling hemorrhage, as in other respects, was then unknown, the bleeding was such as to greatly alarm the patient. This experience deterred him from seeking treatment for so many years. When he consulted me the growth had, of course, long ago returned, and it required great effort to force air through either nostril. There was an extremely disagreeable stuffy feeling in the nose, and in trying to relieve himself he was continually blowing it in a violent manner. This, in addition to frequently recurring attacks of asthma, had made life a burden for years. On examination I found polypi com-

pletely plugging the right nasal cavity, filling every crevice from roof to floor and tightly packed. They extended from near the anterior to the posterior opening. On the left side the condition of things was almost as bad. The points of origin afterwards proved to be numerous, but as usual none grew from the septum. The treatment was both tedious and difficult, but by snaring off piece by piece, gaining as I went on more and more room in which to work, I finally succeeded in emptying both cavities throughout their length, with the exception of the small superior meatus. The resulting freedom of the passage of air and feeling of comfort in every way made him the happiest man whom I have ever seen. But the middle turbinated bones approached so closely to the septum and the spaces above them were so stuffed with the growths that they could not be satisfactorily cleared out. A recurrence was therefore anticipated, and, in fact, eight months later they began to give trouble again. This time, however, they were easily cut off again up to the old level, and he was made comfortable as before. Some pieces of considerable size were severed, not only without hemorrhage, but actually without the patient's knowing when it was done; and this is not unfrequently the case. The patient is still under treatment, and I hope to eradicate the growths permanently.

There is one point in this case which illustrates the now well-known fact that affections of other parts of the body are sometimes closely connected by a reflex neurosis, as the phrase is, with nasal disease. This is especially apt to be the case with asthma, and the point I wish particularly to notice is this: from the time of the first operation to the present this patient has been almost entirely free from the asthma that was such a source of misery to him before. It is now the routine practice with many to look to the nose in every case of this disease as at least a possible source of the trouble.

I will not go into the treatment of polypi further than to remark that the forceps has been completely superseded by the snare. There can be no comparison between the two. The snare causes less pain and less hemorrhage, smaller cavities may be reached by it, and it is more effective in every way. The only advantage still claimed by some for the forceps is that the polypus may be torn out by the roots, but this is theoretical only; in most cases the growth itself tears and the so-called root is left to grow again. If the snare is applied close to the membrane a recurrence is not likely,

and if the extirpation does not seem to be thorough, the point of origin may be cauterized. As a rule the clumsy forceps cannot be gotten close to the origin, and must take hold where it can. With regard to the preference of the cold or the heated snare, there is a difference of opinion. Some cases are better treated by the first, others by the second.

In conclusion, that which I wish to emphasize beyond anything else is that, in every case of nasal trouble, however apparently trivial, it should be the invariable rule to *make a careful inspection of the cavities*. It is hardly to be expected that every physician should possess the necessary throat mirror, or have the requisite skill to make a rhinoscopic examination, but a nasal speculum and a head mirror ought to be at the command of every one. I admit that, to most of us who have not paid special attention to the subject, a glance into the anterior nares gives little information, especially if there is congestion of the parts, but the application of a drop or two of a four per cent. solution of cocaine, either in the form of spray or with a small cotton mop or camel-hair brush, makes a wonderful difference. In a few minutes, as we all know, the erectile tissue becomes contracted, the blood is forced out of its vessels and the membrane is closely applied to the turbinated bones. The result is that this dark cavity is comparatively opened up to the light. With the nasal speculum in position, *the tip of the nose elevated by the finger*, and a head mirror throwing a strong artificial light into the nostril in different directions so as to command all possible parts of the cavity, its bony conformation must be very unusual if any abnormal growth escapes detection. I am aware that a few cases have been reported of alarming symptoms following an application of cocaine to the nose, but the possible idiosyncrasy of one patient in a thousand is not to outweigh the great advantages to be derived from its use. I know, too, that the injudicious use of the drug for long periods has led in some cases to the formation of the cocaine habit, and that some are afraid of it on this account; but the same charge can be brought with greater force against morphine, and I have yet to hear of a physician who never uses morphine. There is no danger in the drug in this direction when used by the physician, it is only when prescribed for the patient's own use that it is liable to be abused, and even then the danger has been very much exaggerated.

THE CONTAMINATION OF FOODS WITH METALLIC POISONS,

By F. P. VENABLE, Ph.D.F.G.S. Chapel Hill, N. C.

(Read before the Medical Society of the State of North Carolina at Fayetteville, May 8, 1888.)

The purity and healthfulness of the food we eat is manifestly a question of paramount importance, yet comparatively little attention is paid to it. Liquid and solid foods are swallowed with a blind ignorance of, or a supreme indifference to what they may contain. Unless the contamination is sufficient to make itself sensible to sight or smell or taste, we are apt to neglect it, forgetful how small an amount of some poisons can cause serious, if not fatal, results. Occasionally a newspaper account of some adulteration startled us from our equanimity, but the effect is not lasting, and we soon subside into our original condition of faith or recklessness.

It is true that our legislators sometimes try to turn the engine of the law upon the evil-doers who would tamper with food, but their wisdom is rarely sufficient to aim the legislation rightly or properly to enforce it. Protection for the people cannot come by mere law-making alone, but by a general enlightenment as to food contamination and by the establishment, at convenient points, of laboratories, manned by experts in inspection and analysis.

Many States have laws on Adulteration of Foods, some of which are laughably inefficient. Dr. Love makes the statement (Parke's Hygiene, Vol. II., p. 509) that "a majority of the acts aimed at the suppression of adulteration in particular articles make no provision for enforcing the law, and hence nothing more is heard of them." This shows the lack of proper enlightenment on the subject. Our law-makers do not know and cannot understand what is needed.

Again, in several of the larger cities municipal laboratories have been established and have proved exceedingly valuable. Abundance of work has been found for them to do, and they have greatly aided in repressing fraud. For example, the Municipal Laboratory of Paris, capital city of the land of wine, examined, during ten months of 1881, 3,001 samples of wine, finding only 279 of them "good." The laboratories afford a partial protection for the cities, but their

multiplication must force those handling contaminated wares to dispose of them to the unsuspecting and unprotected farmers and dwellers in the small towns. It has seemed to me somewhat anomalous that fertilizer control stations should be established all over the country to analyze the food of the soil, whilst no one looks after the food of the tiller. Should there not be Board of Health laboratories to examine our water, milk, vegetables and groceries?

I can but briefly speak of some of the more common, and hence more dangerous, forms of food contamination, without entering upon the subject of adulteration in general. In many cases, doubtless, I will but remind you of facts you already know, but by bringing them afresh to your attention something may be done to stay the dangers which beset the people.

Food may be contaminated with metallic poisons accidentally, through ignorance or carelessness, or, secondly, intentionally. Some little instruction in the chemistry of every-day life in our public schools would largely do away with the first source of dangers. Analytical experts alone could antagonize the second, and we cannot include intentional adulteration within the scope of this paper.

The principal poisonous metals occurring in food are copper, lead and zinc, and as to the exact physiological action and degree of danger from these, a variety of opinions seem to exist. Hassall calls them all cumulative poisons. This can only be true of some of them by extending the word cumulative to the effects resulting from their action. The system, for instance, is apparently capable of eliminating a little of the zinc compounds, but the derangement caused by frequently repeated small doses may so aggregate as to cause serious trouble.

The contamination of water with lead from the conducting pipes has been the object of so much attention that this danger is generally well guarded against, and will need no special mention in this paper. But there is a great and growing danger with regard to zinc salts getting into our drinking and cooking water, and to this I have already adverted in the *NORTH CAROLINA MEDICAL JOURNAL*, Vol. XIII., No. 5, p. 221. The use of zinc or zinc-lined vessels for storing water, and of galvanized iron pipe in transporting it, is becoming more and more common. I have examined water thus brought through galvanized iron pipe a distance of — yards and found — grains of zinc to the gallon.

Galvanized iron is iron coated over with zinc. It is well to state, also, that this zinc nearly always contains arsenic. In some localities milk is often kept in zinc or galvanized iron vessels. Such vessels are cheap, lasting, and, besides, have the effect of keeping the milk sweet a longer time than usual, and adding about twelve per cent. to the amount of the cream. The explanation of these last actions is to be sought for in the neutralization of the acid, as fast as formed, by the zinc giving zinc lactate. From the presence of this acid such use of zinc is much more dangerous than in the storage of water.

If water and milk attack and dissolve zinc and lead when brought in contact with them, manifestly the solvent action is greatly increased in the case of distinctly acid foods such as fruits and vegetables. We find in these especially acetic, tartaric, citric, malic and aspartic acids, sometimes uncombined, sometimes as partially saturated, and hence still acid salts. These have strong solvent action on some metals, particularly if the process of oxidation is going on at the same time. Furthermore, meats which have been salted attack such metals, and where either the meat or the flavoring substance, as mustard or onions, contain sulphur, the action is increased. Lastly, it must be borne in mind that fats are slowly saponified by these metals, glycerin being set free and compounds called soaps or plasters formed between the metals and the acids of the fats.

Our ordinary articles of food may be contaminated during preparation or by storage.

In preparing food in metallic vessels several agents aid in the solvent action. First, there is atmospheric oxygen, which is present in the water, used in cooking, then we may mention acids such as vinegar, salt, soda and sugar. The metals are probably first attacked by the oxygen forming oxides, and these are brought into solution by the aid of the acids, salt, soda (forming with lead, for instance, plumbate of soda) or the sugar (forming saccharates). If cooking vessels, especially copper or brass, are scrupulously cleaned and brightened, freeing them from all oxide (or verdigris) just before using, and then the substances, cooked in them, removed as soon as the cooking is over, not allowing time for oxidation and solution, the danger of contamination is much lessened.

Copper and brass vessels are so convenient that their use is greatly extended, but it would be far better if the inside were freshly tinned every now and then. This precaution is taken by the Asiatics who

heat the copper above the melting point of tin and then rub over the interior a piece of block tin. Tin is attacked, but more slowly than the other metals, and forms less objectionable compounds. Unfortunately, much of the block-tin offered for sale is impure, having arsenic, antimony, lead and copper as its principal impurities, and cases of serious arsenical and lead poisoning have been noticed from the use of tin-lined vessels. Still pure tin can be gotten, and even the impure is better than the unprotected copper or brass (which is an alloy of zinc and copper).

Metallic cooking vessels are often protected by a coating of glaze or enamel. The glazing generally employed is of two kinds: Either it is composed of aluminium and potassium silicate along with calcium phosphate or sulphate or some similarly harmless materials, that is glass enamel; or it is essentially lead glass with a large proportion of lead. This lead glass, as being easily fusible, very commonly forms the glaze on yellow and light-colored earthenware, which is used for baking-dishes, preserve-jars, milk-crocks, etc. Our ordinary glass table-ware is also lead-glass, generally, but contains less lead and is less easily attacked. It is maintained by some German authorities that even this is dangerous, so that the use of such glass is more common in England and America than on the continent of Europe. Still the food remains in contact with it so short a time that the danger can only be slight.

If the earthenware has been poorly baked the glaze is still more attacked. In "Umspratt's Chemistry" the statement is made that badly baked ware readily afforded indications of the presence of lead when digested with vinegar. Where these earthenware vessels are used for cooking the lead-glaze becomes decidedly dangerous. *Æcum* has written: "Pots of this kind of stoneware are wholly unfit to contain jellies of fruits, marmalade and similar preserves. Pickles should in no case be deposited in cream-colored earthenware."

The reason for warning against this special color of earthenware is because it is usually made of materials which do not stand baking at a high temperature, and hence a more fusible glaze is applied to them.

Æcum goes on to say: "The baking of fruit-tarts in cream-colored earthenware and the salting and preserving of meat are no less objectionable. All kinds of food which contain free vegetable

acids or saline preparations attack utensils covered with a glaze in the composition, of which lead enters as a component part."

The color in some of the enamels for metals has been mentioned as a source of danger. The cheaper colors that would probably be used, provided that lead colors are excluded, would, I think, hardly be dangerous.

Frequently cooking vessels of tin-ware are used. Of the tin-ware itself I shall have more to say further on, but I wish now to mention the solder used on such vessels. This is made of lead and tin, and is sometimes present in considerable amounts in the joints of the tin-ware. The boiling of water alone in such vessels will cause the solution of some of the lead, and of course the acids of foods would dissolve still more. The ware should be formed of solid tin, without joints, when practicable. If solder must be there, the least amount necessary for the work should be used. Often it is possible so to turn the joint as to bring the solder on the outside. Of course this is much better.

Coming now to the storage of foods, we find occasionally zinc or galvanized iron used, as for water and milk. The danger here has been pointed out. The use of glass jars is more common. These should be made not of flint or lead, but of ordinary soda or calcium glass (called "window" or "crown" glass). These should be also entirely of glass. Often we see them with zinc tops or covers, which are screwed down upon the contents.

In Parke's Hygiene, Vol. II., p. 514, a case is reported where serious sickness attended the use of cherries preserved in such a jar. It was found that these cherries contained a small amount of zinc, whereas the same amount of fruit preserved in jars with glass covers did not contain the metal. The sickness in this case may or may not have been due to the zinc, but the fact of the contamination, and, at least, probable danger from it, remains.

By far the most common article used for storing food is tin. The use of this in the cans for fruit, vegetables and meats, and the buckets for lard, oil, etc., is enormous. I have been unable to find out from the census reports the exact amount of tin-ware used in this way in the United States, but as the tin is mainly imported and bears a duty-tax of between \$5,000,000 and \$6,000,000 (which it has been proposed in the present Congress to double), the value of the ware must be many millions.

As each can has the value of a few cents only, their total number is something incredible. In the census of 1880 the value of fruits and vegetables alone, "canned and preserved," is given as \$17,599,576. And the industry is growing rapidly. I see it announced in the papers that our Agent of Immigration is making arrangements for the establishment of forty canneries in this State.

Tin-ware is made by dipping sheet-iron or thin sheets of steel into melted tin, securing thus a protective coating over the former metal. There are two grades of tin-ware: that in which the coating is of fairly pure tin, and secondly, that in which, to cheapen the product, the tin has a large admixture of lead. This is known as *terne plate*. The first has a bright appearance, the second is heavier and of a duller appearance. The same two grades are seen in tin-foil also.

If, as is required by the French Government, the tin-cans are made of the first grade ware and the soldering is done either with pure tin or on the outside, the only possible contamination must come from the tin itself. If *terne-plate* is used and special care is not taken, tin and lead, from both can and solder, and zinc chloride from the latter, may be present in the contents of the can. A solution of zinc chloride is the common soldering fluid, and its detection in canned goods has been reported by Battershall. Even with pure tin, the careless and excessive use of solder is frequently a source of danger as lumps of the solder break off and are taken into the stomach along with the food.

Battershall (*Food Adulteration and its Detection*, p. 225) records the examination of 109 samples of canned goods, 97 of which contained tin, 39 copper, 4 zinc and 2 lead. The copper was introduced by the preparation in copper vessels before canning, or was intentionally added as Cu SO_4 to give a green color, as in peas, pickles, etc. The small number of samples found to contain lead showed that the *terne-plate* is not much used in making cans. Indeed, Hall (*American Chemical Journal*, Vol. IV., p. 440) states that he has tested cans from various sources and not once did he find lead enough to show intentional adulteration. The leaded tin or *terne-plate* is too heavy and dull-looking for ordinary use in cans, though it is largely used in roofing, and so can easily come in cistern water caught from such roofs. In the Michigan Board of Health Report

(for 1878, p. 19), however, analyses of tin-ware are given in which lead is appreciable, even considerable amount was always found.

Hall also gives some analyses of tin-foil, which is so much used as a covering for such food as chocolate, yeast, cheese, confections and the like. Out of 8 samples analyzed 4 contained about 75 per cent. of lead. The high price of the article enclosed seemed by no means to insure a pure tin covering. Cheese, as it contains acid, or so easily forms it, should certainly not be enclosed in tin-foil.

Of course, other things being equal, the longer the vegetable or fruit acids are left in contact with the tin, the greater will be the amount of metal dissolved. The contents of some cans examined have contained as much as four grains per quart. Now, while no injury seems to result from small doses of tin, and it does not seem to accumulate in the system, large doses must be prejudicial. It would be advisable, then, to have all cans stamped with the year in which they were put up. The assurance of the healthfulness of canned goods after being kept a few years is not great.

The canning of foods has formed one of our most important discoveries and has greatly added to the comforts of modern life. I would by no means decry the use of canned goods, and tin-ware seems at present essential to their cheapness. But the people should be instructed as to the possible dangers in their use, and be armed against the unscrupulousness of grasping manufacturers. If the cans are of good, bright tin-plate, properly soldered, and are reasonably fresh, there may be said to be no risk in their use. Special warning should be given, however, against leaving fruit or vegetables in the opened cans, as the action on the metals is very rapid after air is once admitted.

Within the limits of this paper it would be impracticable to give all the possible contaminations of foods with metals. The more usual have been recounted. The less common, as, for instance, the case of the baker, mentioned by Blyth (Poisons, p. 565), who used old painted wood in the fire of his oven, and so covered his loaves with the dust of lead oxide and poisoned sixty-six persons, must be passed by. Nor can we enter upon the fraudulent, intentional addition of metals to foods. Such are to be looked for wherever man's greed and dishonesty can find opportunity.

To the physiological chemist and the physician I leave the discussions of the degree of danger from the presence of these various metals in the ordinary articles of our food.

MICROSCOPIC EXAMINATION OF THE EPITHELIAL TISSUES.

By P. B. BARRINGER, M.D., Davidson College, N. C.

PART I.

To the medical microscopist there is no class of tissue so needful of recognition as the epithelial. In the examination of all excretions, secretions or dejecta we find one or more of the various forms of this group present. Would you examine a specimen of urine for casts, blood-cells or what not? you will find several varieties of the omnipresent epithelial cells in abundance. Would you examine the dejecta of the bowel for the ova of the various human entozoa? the most abundant forms in the tissue debris will be epithelial. Should you begin the study of the pathogenic bacteria, you might think that at last you had found one kind of work in which you would escape the onus of epithelial tissue detection; but no, there is no form of pathogenic bacteria known that is not ordinarily found associated with certain epithelial cells. The gonococcus in the female is mainly on the squamous cells from the vagina; in the male, on the cylindrical cells of the anterior urethra. The bacillus tuberculosis is, practically speaking, always associated with the ciliated epithelium of the respiratory tract. The bacillus of Erbeth, as well as the comma bacillus of Koch in the dejecta of the bowel float amongst myriads of the cast-off cells of the columnar type. If, then, these cast-off histological elements are to be our companions, wherever we go in microscopic research it behooves us to get thoroughly acquainted with them. This we can only do by studying them class at a time, and observing both their morphological and chemical characteristics, for the beginner must know that it is not by *looks* alone that things microscopical are identified, but quite as often by the way in which they behave in the presence of certain reagents and stains. It is this chemistry of the microscope that has advanced the art in the last few years fully as much as has the improvement in lenses. Let us, then, take up for study during the following month the most important division of this group, viz: Squamous epithelium.

For the benefit of those who have never taken a course in human

histology, I will state that squamous epithelium is that layer of human tissue which covers the entire surface of the body and lines all openings leading into the body, as the mouth, anus, vagina, etc. Covering the entire surface of the body, the hair and nails are but outgrowths from it. Among the animals we find that the horn of the rhinoceros is but a bundle of hairs, as it were, cemented together, and growing wholly from the skin without bony connection. In all parts of the human body (except in the back of the eye) this tissue is laminated or in layers. These layers are almost infinite in number in those parts of the body that are exposed to constant abrasion, as the heel and palmar bases of the fingers.

Let us now turn to the study of some of the squamous tissues under the microscope. You will find that the best specimens for the exhibition of the characteristics of this group will be obtained from the inferior wall of the vagina. Still as even physicians have not always an opportunity of obtaining vaginal epithelium, it is better to obtain a specimen from the buccal cavity. With a spatula or not too sharp knife-blade let us then scrape the inside of the cheek. The edge of the blade will be found covered with a grayish margin of cells, corpuscles and salivary fluid. Take of this a very small quantity, say an amount smaller than a pin's head, add to a drop of normal salt solution* on a glass slide and agitate thoroughly. Invert over this a clean cover-glass, the under surface of which you have moistened with your breath.

Now, with a power of four or five hundred diameters (one inch eye piece and one-fourth or one-fifth inch objective) examine carefully. You will find irregular masses that present no definite outline, but if you will examine more carefully you will find around these certain isolated flat cells with an irregular central spot. This is a squamous cell and its scale-like appearance seems to well warrant its name. Move your mirror-bar from side to side, and see if the change of light brings out the cell-margin or cell-nucleus more clearly. If it does not do so, focus up and down until you can see all parts of the cell distinctly. Should you still not be able to make out the nucleus distinctly, you may "develop" it by active acid. This modifies the refractive index of the cell substance, and enables you to differentiate

*Normal salt solution is a three fourth per cent. solution of common "table salt" in water. Any "stains" can be bought at 25 cents per bottle from microscopic material dealers.

the nucleus easily. The addition of the dilute acetic acid may be made to our specimen *in situ* as follows: Place a drop of dilute acid on one edge of the cover-glass and the corners of a blotting-paper on the other, the acid will be drawn slowly through and the nuclei will be shown with great distinctness. In the same manner you may draw under the cover-glass any other staining fluids or reagents.

With a new specimen from your knife-blade irrigate with liquor potassii and see the masses of cells slowly swell up and separate one from the other.

Irrigate as above with an ammonia-carmine stain and see the beautiful differentiation of the nuclei.

Having gone through with the above methods, and having brought out clearly the shape, size, etc., of a typical epithelial cell, do not for one moment suppose that you are prepared to know one whenever you see it. You are only ready to look for them where you expect them. Repeat the study of a simple scraping from the mouth daily, and ere long even the seemingly shapeless methods of heaped-up cells will begin to assume familiar forms. After this begin to look for your familiar epithelium in urine, lachrymal fluid, sweat and all of the body secretions. As the microscopic examination of urine is the most important in matters of diagnosis, you must learn to distinguish the three forms found in urine. Then familiarize yourself with the general appearance of dandruff. If there are any cases of "ringworm" in your neighborhood, get a "scraping" and study in the normal salt solution for the fungi. Eczema marginatum and the common "barber's itch" will both show squamous cells covered with fungi.

Be careful that you do not catch these diseases from your specimens.

(TO BE CONTINUED.)

A CASE OF SLOW PULSE.—Dr. Czarkowski reports the case of a boy, five years of age, who had a pulse of 32 to the minute. The slow action of the heart was thought to be due to cerebral anæmia, and under treatment directed toward this condition the pulse ascended gradually to 60, beyond which it could not be made to rise.—*Meditsinskoye Obozreniye*.

SELECTED PAPERS.

APHORISMS ON PNEUMONIA, PLEURISY, WHOOPING-COUGH AND TUBERCULOSIS OF CHILDREN.

By E. Bouchut. Compiled and translated from the French by
Charles Everett Warren, A.B., M.D., Harvard.

PNEUMONIA.

Primary pneumonia is of rare occurrence in infants at the breast.

Pneumonia is usually secondary, following simple bronchitis; or a bronchitis intercurrent with fever; or an acute febrile disease.

Primary pneumonia is usually lobar, while secondary pneumonia is always lobular.

Lobular pneumonia is sometimes discrete; sometimes confluent.

Pneumonia in children at the breast is almost always double.

Lobar or lobular pneumonia occurs in two forms, differing in anatomical lesions, the one being intra-vesicular, the other extra-vesicular.

Intra-vesicular pneumonia, usually primary, leads to congestion and thickening of the cell-walls of the lung and a plastic deposit characterizing red and gray hepatization.

Extra-vesicular pneumonia, always secondary, produces only congestion and thickening of the cell-walls, there being no fibrinoplastic exudation to fill the vesicles.

Chronic pneumonia, more common in the infant at the breast than in the adult, is always lobar.

Pneumonia often engenders the formation of miliary fibrinoplastic granulations in the interior of the lung-cells, in serofulous children, or the issue of parents tainted with serofula.

The development of lobular pneumonia is favored by the crowding together of children in nurseries and in tenements.

Frequent cough, concurrent with fever and labored breathing, intimate an invasion of pneumonia.

Groaning and sighing expiration indicates, without doubt, an attack of lobar or confluent lobular pneumonia.

Panting respiration, accompanied by a continual movement of the nostrils, is a sign of pneumonia.

Dulness of the chest is, as a rule, but slightly marked in pneumonia of infants at the breast.

When dulness of the chest exists in a young child that has a severe cold, pneumonia is to be feared.

Dulness of one side of the chest in a young child characterizes pleurisy rather than pneumonia.

A subcrepitant rale concurrent with cough, fever and difficulty of breathing, is conclusive evidence of confluent lobular pneumonia.

A souffle, rare in children at the breast, usually pertains to lobar pneumonia, sometimes to lobular pneumonia.

Bronchophony—reverberation of cries, from the chest, as from a sounding-board, indicates pneumonia of the severest type.

An exaggerated, tremulous movement of the thoracic walls, at the moment of crying, indicates pneumonia; while, on the other hand, marked absence of movement indicates the existence of pleurisy with considerable effusion.

High or moderate fever, at first continuous, presents many exacerbations in the course of pneumonia.

Pneumonia, secondary to simple pulmonary catarrh, often "cures itself."

Pneumonia, secondary to measles, scarlatina, or variola, is very grave.

Pneumonia in children at the breast is especially grave on account of the complications which precede or follow its development.

Pneumonia of children at the breast has a marked tendency to pass into the chronic state.

Pneumonia, secondary to the development of miliary, fibrinoplastic granulations, or of tubercles, is usually fatal.

Groaning and sighing expiration, accompanied with movements of the nostrils, prognosticate great danger to the life of the child.

Swelling and œdema of the hands and feet, during an attack of pneumonia, prognosticate imminence of death. (Trousseau.)

The return of the secretion of tears suspended during pneumonia, augurs well for the favorable termination of the disease and a speedy recovery.

Leeches, blisters on the chest and small doses of ipecacuanha, at brief intervals, simple remedies, usually suffice in the treatment of pneumonia.

PLEURISY.

Acute pleurisy, with serous effusion, is very rare in the new-born and in infants at the breast.

Absolute dulness in one side of the chest, in a young child, indicates pleurisy rather than pneumonia.

Dulness of the chest and absence of thoracic vibration, best ascertained by the hand at the moment of crying, indicate pleuritic effusion.

Pleuritic effusion in young children is of grave portent.

Pleurisy in young children, passing from the acute to the chronic stage, is fatal.

A great amount of effusion, in a young child, should be treated by thoracentesis, using a small trocar for the purpose, with antiseptic precautions.

In the second infancy, fever, with dulness of the chest, absence of the vesicular murmur, bronchial or amphoric resonance, friction and rubbing sounds, with ægophony, indicate pleurisy with considerable effusion.

Pleurisy of the left side is of graver portent than that of the right, since it crowds the heart to the right, and may thus cause a fatal syncope.

In some points the auscultation signs in acute or chronic pleurisy and in cavernous tuberculosis are similar, since in both amphoric resonance and gurgling sounds are present, with pectoriloquy; but during the course of the disease the rapid production of the auscultation sounds will serve to eliminate phthisis. as in phthisis the abnormal sounds occur only after a long period of time.

WHOOPIING-COUGH.

Whooping-cough, a modified bronchitis of special character, is due to the influence of a specific, indiscernible, yet irrefutably existent agent, the action of which upon the organism baffles pathologists.

Violent fits of coughing, of a sonorous or braying character, mucous expectoration and sublingual ulceration characterize whooping-cough.

An infant who coughs much and is afflicted with ulceration of the frænum of the tongue probably has whooping-cough.

Whooping-cough is very contagious and often epidemic.

Whooping-cough, attacking a healthy child, may be aborted and disappear from displacement of the disease and changes in the blood-aeration, consequent upon a change of air and place.

Whooping-cough sometimes attacks infants at the breast and those of adult age; but it is especially a disease of the second infancy.

Whooping-cough is a nervous affection grafted upon a bronchitis, beginning with simple catarrh and ending with characteristic spasms.

Whooping-cough is more or less severe according to the season of the year in which it is epidemic.

Whooping-cough, remarkable to say, is of no serious portent, other than from indirect consequences, e. g., vomiting, which follows the violent coughing, may lead to inanition; while fibrino-plastic deposits in the lungs may engender pneumonia, phthisis, etc.

Whooping-cough is the only disease of infancy where cough is accompanied by true expectoration.

An acute disease, intercurrent with whooping-cough, diminishes its intensity and causes it to disappear—it may be temporarily or it may be permanently.

TUBERCULOSIS.

Tuberculosis of the bronchial lymphatics, very common as a complication of pulmonary phthisis in children, is, on the contrary, very uncommon as a primary disease.

In scrofulous children tuberculosis often originates in the lymphatics of the bronchi and chest.

No noticeable functional trouble results from tuberculization of the bronchial lymphatics, but if the glands form a mass in the mediastinum of such a size as to compress the important organs placed therein, indirect lesions of these and neighboring organs may result from compression.

The most important consequences of mediastinal tuberculosis are: Compressed bronchi, flattening of the large vessels, displacement of the œsophagus and distention of the pneumogastric region, with such functional lesions as may result from compression of vital organs, varying with the organs involved.

Œdema of the face, dilatation of the superficial vessels and

epistaxis or hemoptysis, indicate mediastinal tuberculosis, involving the superior vena cava and pulmonary artery.

Attacks of asthma occurring in a child that has no lesion of the heart or lungs are suggestive of mediastinal tuberculosis.

A slight vesicular murmur in one globe of the lung, coinciding with substernal dulness, may be due to compression of the bronchi, due to mediastinal tuberculosis.

If the coexistence or pulmonary phthisis does not cause death by marasmus, tuberculosis of the lymphatic glands may be cured; but, as a rule, death ensues from hemoptysis or asphyxia.—*Med. Times.*

NEW YORK ACADEMY OF MEDICINE — PEDIATRIC SECTION.

Meeting June 27, 1888.

Dr. J. Lewis Smith, President, in the Chair.

The President, on calling the meeting to order, stated that the summer diarrhœa of infants was one of the most fatal diseases; that in New York alone about two thousand die between the months of June and October, and in Brooklyn one thousand from the same cause. The disease was especially fatal among the poor, who cannot leave the city, and this statement applied likewise to all European cities. Hence there could be no more important subject for consideration, and that the Section should consider itself fortunate in listening to papers from physicians of ample experience.

Dr. A. Jacobi read a paper entitled

REMARKS ON SUMMER COMPLAINT.

He said that he had come to the meeting to listen rather than to speak, and had selected only one or two points upon which to make some remarks, mainly upon defining what summer complaint is. He looked upon summer complaint as a clinical, not a pathological entity. He made this point because it had become customary within a few years to say, especially in speaking of the pathology of this disease and diseases in general, that there is only one cause for a

great many diseases. This was wrong. The fact that bacteria had been found led to the assumption that all these diseases were due to one such cause. This may be true in a great many diseases. We are inclined to believe that such diseases as diphtheria and scarlatina are due to such a cause. Should we imagine, because the pneumococcus has been found in cases of pneumonia, that therefore no pneumonia exists except from such a cause? There are certainly many forms which are not due to the pneumococcus, but to other proximate causes. This is true also of summer complaint. Gastric with intestinal catarrh and ulceration give us the same clinical symptoms. There is one form due to the invasion of bacterial germs, and if we speak of summer complaint we must have in mind a group of diseases which have the same clinical symptoms, but not the same cause, as long as the microscope has not discovered the special agent. It was particularly in view of this tendency to say that we have always to look for a bacterium for the special cause that he would make a few remarks.

One of the questions that always comes up again is this: is heat by itself sufficient to cause diarrhœa? This direct effect has been denied by Seiler, who ascribes the effect to the fermentation induced by the heat. This fact was to be deplored. It is not proper to look upon putrefaction as the only cause. Diarrhœa has been observed in sunstroke, in the adult. In these cases the post-mortem appearances are the same as in the disease under consideration. Why solar heat should act on the brain alone is hard to understand.

Infants brought up on good mothers' milk ought never to be sick with diarrhœa, but they are, nevertheless. We know that meat affects them in various ways: it produces convulsions and convulsions with diarrhœa, colic and enteritis make their appearance. Here, then, is a noxa which is not an invasion of bacteria. Virchow's two forms of bacteria exert but little effect on the albuminoids, yet various decomposition are formed from the other constituents. Baginsky is of the opinion that if anti-fermentatives be given, they are apt to interrupt the action, but the peptone production continues and the intestine is full of ballast. General catarrh follows, absorption decreases, lymph cells emigrate. The catarrh is the beginning and acid fermentation follows soon. The process, however, is not a simple one. During the first, the acid fermentation, albumen is

well borne; during the alkaline fermentation sugar is well tolerated. When the acid fermentation ceases and the alkaline begins is hard to say. Emetics were found useful by our forefathers. Good results were obtained by the irrigation of the digestive tract.

Dr. A. V. Meigs, of Philadelphia, read a paper on the

DIETETIC MANAGEMENT OF THE SUMMER DIARRHŒA OF INFANTS.

With much pleasure he had accepted the invitation of the Chairman to give his views on this question, which was one to which he had given much attention, having had a large experience in the treatment of the disease in Philadelphia hospitals and private practice. When called to treat a case of this nature, his first question was: What food has the infant been taking? As yet he was quite unable to believe that even in acute cases it was necessary to take away the milk of the mother or nurse. They continue to suckle the child, but the administration of water is very useful, as the child is often thirsty. Stimulation is of the utmost importance. Brandy or whiskey, a teaspoonful three or four times a day, or thirty drops in sweetened water every two hours. As to other food besides mothers' milk, if the milk of the mother is faulty, the nursing must stop and the infant be fed artificially. On the other hand, if the mothers' milk is apt to be good, it might be supplemented with one-half ounce of beef juice or wine whey. As to the dietetic treatment of the summer diarrhœa in hand-fed children, the first thing is that the food be carefully investigated. The best food for hand-fed infants is cows' milk; if it disagrees, put the infant on the exclusive use of beef juice.

Cows' milk contains about three times as much casein as human milk. When cows' milk is diluted, the amount of fatty material is reduced, and therefore cream and sugar should be added. To undiluted cows' milk, too, sugar must be added. Lastly, cows' milk is acid, human milk is alkaline. Hence, bicarbonate of sodium or lime-water should be added, the latter being the best.

In the dietetic treatment of cholera infantum, he depends upon milk foods mainly; diluted cows' milk, with the addition of lime-water, has given the best results. Not more than two or four ounces should be given at each feeding, and we should take a lesson from nature in this respect. The amount of food should not be increased until the child is about a year old. It is also desirable to vary the

food. It may be diluted, and cream and milk sugar added; if cane sugar be used instead, the quantity should be less. The addition of some starchy material, such as dextrin, is useful. One of the best is arrowroot; and barley water, as recommended by Dr. Jacobi, is very good. Mellin's Food has often proved most useful. In some cases excellent results are obtained from taking away all milk and administering beef juice alone, but many infants will vomit the soup as soon as given.

It is also necessary that precise directions be given how the infant should be fed, as to amount, frequency, etc. A young infant should be fed every two or three hours; older infants four to six times a day. Experience had brought the author to the conclusion that only in rare and exceptional cases is it either desirable or necessary to feed more frequently than every two hours. If collapse seems imminent stimulants are very good. In dealing with summer diarrhœa the treatment should not be changed before well ascertaining the result of the first measures. Often, if the physician had waited a few hours longer, he would have found that he held the key to the situation. Ripe experience of the physician will be better than great learning.

As to micro-organisms and the chemical poisons in the milk, it is a fact that milk and food prepared with it may become dangerous. The existence of the chemical poison in milk has been demonstrated, so has the micro-organism. But the time is not yet ripe for the acceptance of the theory. The arguments are strong against it. Infants are attacked though nursed directly by the mother, in whose milk no micro-organism can exist. If we make no advance in our treatment put the infant on an animal diet. The use of an exclusively animal diet is not new, but old. Certain cases will yield to it, in exceptional instances it fails; then we must return to milk. If micro-organisms were the only cause, no child would ever recover, and yet they continue to thrive under the milk treatment. If he were to accept the micro-organism argument, he should have to abstain from giving animal food; but then the difficulties are enormously increased; this no one will deny who has tried to feed on an exclusive meat diet. If vomited, we must try a mixed diet of milk and meat. The decision of the question: What constitutes cholera infantum? will often be very difficult.

If infants are taken from the breast, often they will not take it

again. Continuing the assumption that micro organisms are the sole cause of the disease, an animal diet must be substituted. It seems strange that as soon as an infant becomes ill, we must take from it that food which is best for it.

Dr. S. Baruch read a paper entitled

A CLINICAL STUDY OF THE ETIOLOGY AND TREATMENT OF SUMMER
DIARRHŒA OF INFANTS.

He said the season for cholera infantum was again upon us. There was a time when he dreaded the approach of summer. He had been taught to regard the disease as an inflammation, chiefly gastro-colitis, and to give minute doses of mercury. The inefficiency of this treatment showed that something must be erroneous. As long as he continued to look upon the disease as merely inflammatory, his severe cases died. He believed it to be chiefly due to the ingestion of micro-organisms. The theories hitherto prevalent were faulty, and have led to false methods of treatment.

The causes were, first, insanitary conditions, poverty, overcrowding; second, atmospheric conditions; third, bad feeding. The first causes prevail not only in cities, but under different conditions. He had observed the disease in rural towns, etc., in the backwoods of South Carolina, in Washington Heights and Audubon Park, and had found cases just as severe among the negroes of the South. While filth increases the mortality, the cause is due to micro-organisms.

Artificial feeding has long been accepted by the profession as a cause. Out of five hundred cases of summer diarrhœa, only few occurred among breast-fed children. That had been ascribed to the difference between cows' milk and woman's milk, but this is an error. The chemical composition of cows' milk had been investigated again and again and the difference shown. But if the artificial food was changed by addition, dilution, etc., we still find great difference in the toleration of the infant's stomach in summer and winter respectively. The researches of Esserich have shown that the great cry about cows' milk has no foundation. He had given casein in excess and found it well digested. Healthy infants are capable of assimilating casein far in excess of their requirements. The author would not go as far as Esserich, for practically cows' milk is not so well adapted to infants as has been accepted. Yet

the cause must be sought in another direction than in the difference of composition.

That high temperature exercises a powerful influence is true; in what manner does temperature change the prognosis? Its depressing effects are predisposing elements, but if this were the correct interpretation, it would not affect the clinical observation that the three factors act in unison, but their *modus operandi* has not been correctly understood. Why does cows' milk not cause disturbance in winter? The development of bacteria is the cause in summer. It was first shown by Pasteur that the coagulation is due to the bacteria. The most important discovery was made by Lister, that a drop of sour milk added to urine produced a change, and that a drop of this urine again caused the souring of milk. Owing to the presence of bacteria the proper breaking up of the casein is interfered with, the intestinal tract becomes inflamed, and thus gives rise to summer diarrhœa. The author cited different writers in favor of this view.

This points the way to treatment: bismuth, mercury, etc., have given good results, while opium has failed.

We know that human milk is aseptic in the gland and is the best prophylactic. The best substitute is cows' milk, which is also free from bacteria as it comes from the udder. Milking is liable to introduce impurities, and foam, which is air with germs, is especially liable to catch any floating impurities. We had learned in other departments how important it was to prevent its access to the uterus. A milking-tube would be useful, but it is not generally applicable, and the same might be said of goats recommended as nurses.

Next to preventing the access of noxious germs, sterilization of cows' milk must be good. Soxhlet's apparatus comes near to the requirements, and Caillé and others have simplified it. These gentlemen think, because milk does not sour, therefore it is sterilized. But it has been shown that this is not necessarily true. Continuous exposure for half an hour at 100° C., is not sufficient for sterilization. Hence Caillé's experiments were not quite as successful as Soxhlet's. Boiling the milk has been recommended by Jacobi as long ago as 1870. By this the casein is made more soluble and digestible. Various authorities corroborate this fact. He had convinced himself that milk could be certainly sterilized if the temperature can

be raised to 266° F., under pressure, and a lower temperature will suffice if continued for a longer time.

The hygienic management of the infant is next in importance. This remark applies to all diseases due to micro-organisms. A daily bath is to be recommended, and a proper amount of undisturbed sleep is absolutely necessary; hence fondling should be avoided. Teething no longer requires the use of the gum lancet, which could be laid on the shelf along with other useless instruments. Though the nervous system is irritated, the process is a natural one. In the way of prophylaxis, attention to the infant's mouth is important. In the mouth, germ-free human milk undergoes no change. It is advisable in the summer months to clean the infant's mouth with a weak solution of boracic acid. Sudden changes of temperature in August are best guarded against by a flannel bandage and sacque.

In the curative treatment, diminish or remove the bacterial supply. A wet-nurse should be employed where possible. The artificial food must be looked after. Barley water and meat broth are very excellent substitutes for milk. A solution of white of egg in water is also a valuable nutriment. The presence of the bacteria must be neutralized and all fermenting material removed from the stomach. The stomach requires absolute rest. All food and drink must be withheld for five or six hours. After the stomach has been thoroughly cleansed—if rest does not bring relief—peppermint, etc., may be tried. A dose of calomel will generally be retained, and acts not as a parasiticide merely, but removes the bacteria from the canal. Castor oil will sweep them out, and large draughts of warm water will do it. A rubber catheter will answer if attached to the fountain syringe. The tube is anointed with vaseline and introduced and retained until a quart of water has passed, the child being laid on the stomach. The thorough irrigation of the large intestines by the physician or competent nurse produces a most soothing effect on the patient; almost invariably quiet slumber ensues, even during the flow of the water. He cited J. Lewis Smith and L. Emmett Holt in corroboration of this fact. Local troubles should be met by local measures. Though he had used antiseptics, he did not think them advisable, because they cannot be made strong enough; still the internal administration of antiseptics, naphthalin, etc., has found advocates. Bichloride of mercury and bismuth might be useful. He had abstained from medicinal treatment so as to maintain the integrity of the stomach.

Prostration of the vital powers is often pronounced. Elevated temperature marks generally a necessity for its reduction. He had not resorted to medicinal antipyretics. Cold baths will often change the aspect of the case. He cited a case in illustration of this point. Inanition, caused by diarrhœa, must be met by careful diet. Cows' milk, properly sterilized, will be useful, and the addition of dextrin and predigestion will be good. Warn mothers not to add milk to prepared food containing milk. He did not believe in Mellin's Food because it requires the addition of milk. Stimulants are good: whiskey and brandy are the best.

Opium was the only drug which will stop peristalsis of the bowels. Dr. G. B. Fowler spoke on the

RELATIVE DIGESTIVE POWER OF THE PEPSINS IN COMMON USE, AND
THE ACTION OF THE DRUGS EMPLOYED IN THE TREATMENT
OF SUMMER DIARRHŒA UPON DIGESTION.

He gave a synopsis of the results of some experiments he had made with different pepsins to ascertain their digestive value. After briefly dwelling upon the mode of manufacture of the article, he stated that in view of the fact that each maker claimed that his product was the best, he had procured thirteen different kinds from different houses. He had put one grain of each into a bottle and had added to each bottle eight ounces of acidulated water (hydrochloric acid and water of one-half per cent. strength). Twelve hundred grains of white of egg, coagulated by boiling and passed through a sieve and very finely comminuted, were added to each bottle. For comparison the first bottle had received only a charge of acidulated water and albumen without any pepsin. The bottles were exhibited. The results were very different from what might have been expected. Most of the pepsin seemed entirely inactive. He was very much surprised with the result obtained with the article made by Parke, Davis & Co., one grain of which had completely digested twelve hundred grains of albumen. Fairchild's was second best, but had not done quite as well. The rest manifested little or no power. It is claimed that this is not a fair test; that a more bulky precipitate may weigh less than one that is less bulky. But the speaker saw no difference in the physical characters of the respective residues, and it was very evident that in these experiments the more bulky invariably were the heaviest. He had used water enough for all the albumen to go into solution

Having ascertained the time required for digesting the entire amount of albumen, he had added some of the medicines we were in the habit of giving in summer diarrhoea to see whether retarding effects were present or not.

Salicylate of sodium stops it absolutely. Somebody says it does so by fixing the hydrochloric acid: The quantity used was 20 grains; even so small a quantity as 3 grains retarded the process about two hours. Salicylate of sodium is very sparingly soluble in hydrochloric acid.

Quinine, 20 grains, there was no digestion; three grains had no effect.

Mariani wine stopped the digestion.

Acetate of lead does not retard or interfere with the action of the pepsin.

Tincture of chloride of iron, 30 drops, hardens the albumen and clumps it up, and retards about two hours; 5 drops retards about 15 minutes.

Salol retards the action about one hour.

Antifebrin only slightly delays the action.

Antipyrin had no effect.

Chalk mixture completely arrested the action (quantity added, a teaspoonful).

Calomel, no effect.

Bismuth sub carb., 20 grains, no effect.

Tincture of kino, copious precipitate of the pepsin and arrest of action.

Tincture of catechu, same effect.

Dr. Caillé said he had several times expressed his opinion and did not wish to take up the time of the section. He was well aware that milk is not scientifically sterilized by the boiling usually practiced. It was a well-known fact that one child will thrive on undiluted milk, another on diluted. In view of the intricacy of the whole subject, he thought collective investigation would be a good way to solve the problem.

Dr. Hutchinson thought Dr. Fowler would not get the same results if he were to repeat the same experiments. He had made six experiments with the best known pepsins in almost the identical way Dr. Fowler had done, but his results had been very different in the order of their merits. Parke, Davis & Co's was far below any experimented

with. Fairchild Bros. & Foster's was found satisfactory. Pepsin is a very valuable product, and little reliance should be placed on such experiments. No two specimens of the same manufacturer would give the same results.

He expressed his appreciation that different observers could come to similar results, referring to Dr. Baruch's statement as to the chemical analysis showing the difference between human and cows' milk, and we know that it will nourish our babies in winter. But in summer our milk commences to ferment and trouble begins. The boiled milk should be filled into a number of small vials, each of which is to contain only enough for one feeding. His experience would corroborate all that Dr. Meigs had said about adding cream to the milk, and he had carried it out for a number of years.

Dr. Harwood had been very much interested in the papers read, and very much surprised that in reference to artificial food nothing had been said about condensed milk. It was his experience and belief that of all the foods procurable none could equal condensed milk, for the reason that it had been heated to a temperature destroying any bacteria. Sugar has also been added. It has not been subjected to the churning process on the railroad that would render it unfit for continuous and regular feeding. In all his practice, extending over a number of years, all the children he had become responsible for had been nourished with condensed with, and in his own personal experience and family, when the mothers' milk failed, the baby was brought up on condensed milk. He had never failed to recognize the value of the addition of an alkali to milk, lime-water being the one added, and the quantity used for diluting one-third that of the milk, and boiled. He had taken the trouble to visit Putnam county to learn the process of condensing before using it.

Dr. Jacobi said he would strenuously object to condensed milk. Those who had done him the honor of reading his writings would agree with him.

In reference to the pepsin experiments, he thought no one present at the meeting had ever given 30 drops of tincture of iron. Muriate of iron in small doses, though in large quantity during the day, does no harm. Whoever had given it in diphtheria would appreciate that fact.

One more point was of the greatest possible importance. Dr.

Fowler had stated that the digestive process was interrupted by the carbonate of lime. That is important to know, though it is quite natural that it should do so, and does it in the stomach. We give it to a sick child which does not secrete the normal amount of lactic food, later hydrochloric acid, and if you pour it into the stomach, digestion is interfered with. Alkalies ought not to be given immediately after eating; they will neutralize the normal acids after eating. Bicarbonate of sodium has different properties. When it is to be given it must be done before the administration of food. In an abnormal stomach there is an amount of abnormal fatty acids, and we give an alkali for the purpose of neutralizing these acids, and then it will do good. Give alkalies before food is taken, then the stomach is free from the fat acids. It is quite possible and physiological to give an alkali before meals and still give pepsin afterwards.

Dr. Meigs said he was somewhat surprised to learn that diarrhœa was rare in hand-fed children in winter. In a foundling institution with which he is connected, one of the worst troubles is diarrhœa. Diarrhœa is not at all uncommon in winter, especially in improperly hand-fed children. Past clinical experience seems to be tending in this direction, that cows' milk should be diluted, and also in favor of the addition of fat, say cream, which adds to the good effects. When he found that analysis of human milk would seem to show that dilution and addition of cream to cows' milk was necessary, it seemed a strong argument, backed up by chemistry and clinical experience.

Dr. Baruch said his statement as to the non-occurrence of diarrhœa in winter referred to the serious form; that occurring in winter is not often fatal.

Dr. Meigs—A good many cases of death were from diarrhœa. They were children of the poorest classes of society, generally in bad health when first seen; they have diarrhœa when first admitted and die.

Dr. Baruch—As to condensed milk, I would like to ask the doctor how much water he adds.

Dr. Harwood—My method is, three teaspoonfuls of the condensed milk from the cans to a half pint of water; one-third of that water is lime-water.

Dr. Baruch—Condensed milk, even Borden's and the Swiss brand,

would have to be diluted one-sixth if you dilute it as stated. Where would the nourishment come in? And you give a large amount of sugar likewise. I think condensed milk is the most pernicious food.

Dr. Fowler—In regard to the value of these experiments: Those pepsins were bought out of the shops, and if they cannot digest any more albumen than appears here, they must be very weak. Saccharated pepsins would be still weaker. As to Parke, Davis & Co's pepsin, it was ascertained that it had been prepared by a new process, and had been only recently put on the market. The practical application of the results I leave to yourselves. It is well not to give these remedies during digestion. The curd that forms may set up conditions which may give you trouble.—*Dietetic Gazette*.

THE ANTISEPTIC ACTION OF CHLOROFORM WATER.*

By Professor SALKOWSKI.

The author has investigated, after Koch's methods, the degree to which chloroform water acts upon micro-organisms. He has used chloroform for some years to prevent urine decomposing before he had time to examine it. [I learnt to use it with the same object for albuminous liquids, when in Leipzig in 1882.] Chloroform prevents all fermentations which depend upon the growth of micro-organisms, e. g., alcoholic fermentation, ammoniacal fermentation of urea, conversion of hippuric acid by fermentation into benzoic acid and glyocol, lactic fermentation and the putrefaction of albumins. But it has no action on those processes caused by unorganized ferments, ptyalin, pepsin, etc.

Milk, to which has been added a little chloroform, kept in a well-corked bottle, keeps its alkaline reaction, but at the end of three months changes to a fine jelly, which, by shaking, forms a white sediment of casein and fat, and a yellowish clear liquid. Sterilized milk behaves in the same manner, which Meissner explains as due to a slowly acting curdling ferment. Cane-sugar and grape-sugar

**Deutsche medicinische Wochenschrift*, No. 16, 1888; reprinted from the *Medical Chronicle*, August.

along with chloroform do not ferment with yeast, but next day the cane-sugar is converted into invert-sugar, by an unorganized ferment in the yeast. Albuminous transudations and pounded meat remain sweet when treated with chloroform, and are found to be free from organisms, both by the microscope and by inoculating gelatin and other nutrient media.

Further, chloroform not only hinders the development of micro-organisms, but also brings about their destruction. Thus a stinking meat broth, shaken up with a few drops of chloroform, at the end of an hour was quite sterile.

Silk threads, impregnated with anthrax-bacilli, free from spores, and exposed to chloroform water for twenty-four hours, failed to inoculate gelatin plates, etc., whilst in control experiments a positive result was obtained. Mixtures of chloroform water and crushed spleens from cases of splenic fever were found to be sterile after standing thirty minutes. Guinea pigs were inoculated with half a Pravaz's syringe-full of a fluid, composed of one drop of anthrax blood and 8 cc. of sterilized water or chloroform water. All the animals died within forty-eight hours when water alone was used, and the others which had been treated with chloroform water and anthrax blood remained quite healthy. The reagent had no action on the *spores* of anthrax.

The action on comma bacilli is so energetic that a fresh cholera cultivation, mixed with an equal volume of chloroform water, is disinfected at the end of a minute. The proof of this is that one fails to get any growth in peptone solutions, gelatin, and so on. This property of chloroform is of great use in the laboratory to keep urea solutions, aqueous solutions of various ferments, pathological fluids, and in artificial digestive experiments, especially with trypsin. [It will be useful to add a few drops of chloroform in preparing artificially digestive foods for patients, provided the vessel be kept well closed. The objectionable bitter taste will not be developed, and if the taste of the chloroform be objected to, it can be removed by a few minutes' boiling.] Also, chloroform water can be used instead of glycerin to make solutions of various ferments, as pepsin, trypsin, etc. [The use in pharmacy will strike every practitioner. I have used it, instead of rectified spirit, for keeping solutions of alkaloids, and also in the preparation of infusions.] It is a useful and cheap preservative for anatomical preparations, though it

gradually becomes colored with hæmoglobin. This might be prevented in various ways, either by laying the specimen in strong alcohol for a short time previously, or by combining it with Grawitz's fluid. [Also by previously washing out the blood in a stream of water.]

Other uses are—(a) To prepare solutions for subcutaneous injection; (b) to employ it internally in diseases of the digestive organs depending on the presence of micro-organisms; amongst others, cholera. [Possibly the benefit that many patients derive from stomachic mixtures containing chloroform water as the vehicle is due to its destructive action on various micro-organisms.] Salkowski gave a dog (36·8 kilos.) 200 cc. (about 6½ ounces) of chloroform water with its food for four days without producing any effect, so that in the treatment of a disease like cholera large quantities of chloroform water might be given. The author recommends it as a mouth-wash. [For surgical purposes it is not adapted, because of the ready volatility of the reagent, but it might be useful for irrigation in cases of puerperal pyrexia and deep abscesses, though its effect on staphylococci is not yet known.]—*American Journal of Pharmacy*.

ORIGIN OF SIMPLE ULCERS OF THE STOMACH.—An evident correlation, M. Letulle asserts, may be observed between the evolution of an infectious malady and the development of ulcerating lesions in the stomach and intestine. At the necropsy of a case of puerperal septicaemia two recent hemorrhagic ulcerations of the stomach were found. The subjacent venules were thrombosed; and the fibrinous clots contained a large number of streptococci, and the venous sinuses were stuffed with colonies of the same micro-organism. Experimental proof has been forthcoming, on the guinea-pig, of the production of mucous and submucous lesions, not only with pure cultivations from cases of dysentery, but also with the staphylococcus pyogenes aureus. The lesions have ranged from ecchymoses to vast rounded ulcerations threatening perforation of the experimentally dilated stomach. It is thought that some cases of simple ulceration of the stomach and duodenum may be ascribed to local growths of micro-organisms.—*Medical Times*.


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EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY, PUBLISHED IN
WILMINGTON, N. C.

THOMAS F. WOOD, M. D., Wilmington, N. C.,	} Editors.
GEO. GILLETT THOMAS, M. D., " "	

 *Original communications are solicited from all parts of the country, and especially from the medical profession of THE CAROLINAS. Articles requiring illustrations can be promptly supplied by previous arrangement with the Editors. Any subscriber can have a specimen number sent free of cost to a friend whose attention he desires to call to the JOURNAL, by sending the address to this office. Prompt remittances from subscribers are absolutely necessary to enable us to maintain our work with vigor and acceptability. All remittances must be made payable to THOMAS F. WOOD, M. D., P. O. Drawer 791, Wilmington, N. C.*

THE YELLOW FEVER—THE CAMP OF REFUGEES IN THE MOUNTAINS OF NORTH CAROLINA.

It is not the time to judge of results of the methods used to prevent the spread of yellow fever except as to some of the irregular and foolish things which are sure to be done when people are greatly frightened. A fusilade of artillery in a town where people are wrought upon by fear and where the sick lie prostrate with fever, is too puerile to be thought of seriously. Nearly all of the quarantine laws are faulty, indeed are begotten of unreasoning fear, and but for the clear-headedness of a very few leaders in all communities

within the region of probable contamination disgraceful scenes would be enacted.

The experience of the spread of the yellow fever in the Valley of the Mississippi, in 1878, broke down the theory in the minds of the public as to the geographical limitations of yellow fever, and this season all along the seaboard the disposition is to quarantine against each other, such action being based generally upon idle rumors of an excited population. If General Lee had had, on the eve of an important battle, an army with a small fraction of the panic which can be found in any town, little or big, from Wilmington to Waycross, Georgia, he would have offered terms of capitulation to his enemy without striking a blow.

If communities within the threatened regions would turn their attention to the real enemy in their midst, the outside enemy need not to be so much dreaded. The bustling about of busy health inspectors and the sprinkling of lime and copperas in exposed places, looks very potent, but is many times a mere mockery, for the interiors of the premises are neglected or covered over in some manner to pass a superficial inspection. It is the old, old story in all our blessed South, and if our towns had not been planted upon porous sand-hills whose kindly mouths drink in the disease-producing virus, we would have been depopulated. But Charleston, for a number of years, and Wilmington, for twenty-four years, has had no yellow fever, and have, indeed, enjoyed remarkable exemption from all pestilence. It would be wrong to say that our cities have done nothing, but they are satisfied with so little, that Superintendents of Health might wish that our towns have a scare continually, to insure the ready money to do what is necessary to keep a uniform sanitary status.

Now that the gates of Jacksonville are to be opened for the refugees, there could hardly have been a better selection than the mountain country in our State. Invitations have been extended to the citizens of the stricken city to make their homes in Murphy, Hendersonville, Hickory, Lenoir and Blowing Rock, accommodating, in the aggregate, about 800 persons. They will find a salubrious country, and a simple warm-hearted people, and a good prospect of having the poison in their bodies, if they have any, neutralized.

In this connection it is well to relate some experience given by Dr. Choppin, formerly of New Orleans, a surgeon of high distinc-

tion, medical director on Beauregard's staff during the late war. He said it was a matter of experience that refugee camps in his State were safe for the first year, but the second year there was occasionally a case, until, in the course of a few years, they had to be abandoned and new places found. This will hardly be applicable to the towns above named, although it must be remembered that yellow fever was carried into Chattanooga, Tennessee, from Brunswick or Savannah a few years ago.

THE VALUE OF POST-MORTEM EXAMINATIONS.

Without a general practitioner makes a persistent effort through his career, he will not be allowed the privilege of post-mortem examinations, so unpopular is it among the majority of patients. What is the result? As far as the doctor is concerned, instead of building upon the foundation of his pathological teaching during his course of instruction, he gets rusty on his normal anatomy as well as on pathological anatomy, and the friends of the dead lose the assurance of the correctness of diagnosis by forbidding the request. There is hardly a physician of experience who does not get valuable lessons from every examination he makes, the longer he has been in practice the more he will learn. In truth, frequent visits to the dead-house is the sure road to more studied diagnosis. Wilmington physicians for the past few years have had unusual opportunities to witness dead-house demonstrations by the courtesy of Dr. T. C. Peckham (now of Memphis) and Dr. S. D. Brooks, both medical officers in the Marine Hospital Service. Wilmington being the station where chronic incurables are sent from Norfolk to Savannah, the number of deaths is larger than at most small hospitals.

In our City Hospital, where white and colored charity patients are received, it is not thought advisable to make these examinations often, because of the great prejudices the negro race have against such performances.

Such suggestions may appear useless to those who do not live in such a sparsely settled State as ours, but we are convinced that the great mass of our profession is losing its opportunities to keep fresh in the essential study of pathology, and the reason is that they do

not lay enough stress upon post-mortem examinations in their intercourse with their patrons. There is nothing so sure to take the conceit out of an over-confident doctor as to have a post-mortem examination and find, for instance, that what he warmly asserted was an ovarian tumor, is a case of tuberculosis of the mesentery. Let us have more post-mortem study, and build up a corps of more competent experts in our State in macroscopic and microscopic pathology.

THE INTERVIEWED DOCTOR.

We have received a letter from one of our subscribers sending us a clipping from a paper in one of our extreme eastern counties containing an interview between the reporter and a physician who had been seeing the sights in a medical college in a city not very far to the North of us. As a piece of advertising for certain colleges it was clumsily done, but it was enough to show that certain colleges are ever on the alert to put in an ad. where it will do the most good. We have no reprimand for the interviewed gentleman, and can safely leave him to his neighbors who have already discovered his bad taste, and doubtless have told him of it. It is no longer a distinguished feat to visit an American college of far higher standing than the one in question, and of course we cannot impute to the gentleman in question any attempt at personal notoriety.

SOME REQUESTS TO OUR SUBSCRIBERS.

If you got two copies of the JOURNAL for August, please return one to this office. By a trivial accident our mailing was thrown into great confusion last month, and, while we tried to give every subscriber his JOURNAL, quite a number got duplicates.

Some one must know where the list of elected officers for the present year, as reported to the Medical Society of North Carolina at Fayetteville, is. It did not come to this office, and progress with the "Transactions" is delayed partly in consequence. If any one has seen the list, or any list as published, we would like to know it; and we would be obliged to any gentleman knowing that he was chosen to office at that meeting, or as a delegate or member of committee, to send us word at once.

REVIEWS AND BOOK NOTICES.

NATURE'S HYGIENE: A Systematic Manual of Natural Hygiene, Containing a Detailed Account of the Chemistry and Hygiene of Eucalyptus, Pine and Camphor Forests, and Industries Connected Therewith. By C. T. Kingzett, F.I.C., F.C.S. Third Edition. Ballière: Tindall & Co., 1888. 8vo., pp. 440.

There is much in this volume to recommend it, and were it not for the frequent laudations of "Sanitas," a disinfectant preparation introduced to the trade by the author, it would be more satisfactory reading. The public is so mercilessly dosed with fine scientific treatises having for their moral, "Take my stuff at a dollar a bottle," that most of them find their way into the waste-basket as soon as they are opened. This book, though, has too much merit to be dismissed without a proper notice.

The elementary principles of Chemistry are first explained, it being a book not for educated physicians, but for all the world interested in hygienics. The author makes his statements about ozone very interesting. "The majority of persons," he says, "undoubtedly attach great importance to atmospheric ozone, and believe it to be the greatest purifying influence in nature; many going so far as to say that zymotic disease exhibits a definite relation to ozone in the sense that when ozone is absent from the atmosphere, disease occurs and spreads, and that where present, zymotic disease is almost unknown. It seems a vast pity to upset notions which have taken so deep root in men's minds, but the truth must be told by scientific men, and the truth is, that nearly all the observations which have been made on the subject are inconclusive. Further on he says: "If ozone does not occur in the air so freely as previously believed, yet another substance does, and one, too, of greater sanitary value, viz: peroxide of hydrogen." The difficulty has been always that the iodized test papers for ozone respond to peroxide of hydrogen in the same way, and that for a universal test it was not reliable. While "ozone exhibits powerful bleaching properties, and converts blue indigo into colorless isatin," it has "little effect on the color of flowers." And again: "It is now quite certain that when phosphorus is partially submerged in water

and exposed to a current of air, both ozone and peroxide of hydrogen are produced in considerable amount. The ozone is carried off in the current of air, and the peroxide of hydrogen dissolves mainly in the water in which the phosphorus is placed." These common-place items are given to indicate the fullness of the volume in objects of practical interest.

Peroxide of hydrogen next engages attention, and its chemical constitution and properties are explained. The very home of peroxide of hydrogen, the author says, is in forests of pines and spruces. So that, instead of ozone being the chemical principle which makes our pine forests so salubrious, it is peroxide of hydrogen. All animal and vegetable substances in a state of change or decomposition, are more rapidly acted upon by peroxide of hydrogen than by ordinary air or oxygen. It not only exercises a disinfecting action by giving up oxygen to decomposing matters, but it can absolutely arrest decomposition.

The author gives prolonged attention to the sanitary influences of trees and forests of *Eucalyptus globulus*, citing the notable instance of the planting of these trees in Tre Fontane, near Rome, by the Trappist monks, giving the ideas *pro* and *contra* as to their practical value. "What is true of the eucalyptus and its oil," he says is also true of the pine tree and its turpentine, and even on a much more extensive scale." * * * "The benefit derived by persons suffering from throat and lung diseases, from residence in such places, is enormously great and beyond cavil. By the natural atmospheric oxidation of the oils of eucalyptus and turpentine there is produced an almost illimitable amount of peroxide of hydrogen and camphoraceous matters which must, perforce, act according to their chemical natures upon the pestilence that may be floating in the air, and upon the animal and vegetable matters that may be rotting in the soil, as also upon the poison which constitutes pulmonary disease."

There are chapters on the following subjects: Physiological Combustion, Putrefaction, Micro-organisms; Rain-water, Spring-water, Sea-water, Water Supply Generally, Including Sewage Contamination; Composition of Excreta, the Disposal of Sewage, Treatment by Irrigation and Chemical Processes, and Dry System; Infectious and Contagious Diseases. Antiseptics; Treatment of the

Sick, Fumigation, Micro-organisms and Disease, followed by the Scientific Basis of Practical Disinfection.

Part II. includes Malarial Fever and Its Cause, The Sanitary Properties of Eucalyptus, and The Hygienic Utility of Perfumes.

We will add one more item which may interest our readers, and then commend the beautifully printed volume to them :

"During the oxidation of oil of turpentine neither ozone nor peroxide of hydrogen is formed directly, but that active substance which is first formed, yields peroxide of hydrogen as a secondary product when treated with water."

EXCESSIVE VENERY, MASTURBATION AND CONTINENCE: The Etiology, Pathology and Treatment of the Diseases Resulting from Venereal Excesses, Masturbation and Continence. By Joseph W. Howe, M.D. New York: E. B. Treat, 771 Broadway, 1888. Price \$2.75.

General considerations, showing the ignorance about sexual hygiene, ignorance of function in the married state, followed by a description of the sexual apparatus, cover the first two chapters. The physiology of the seminal fluid, its general appearance, movements under the microscope, including the mechanism of erection, constitute the third chapter. The fourth chapter treats of diseases from excess, results of excess and mental emotion, diseases produced by sexual excess and masturbation, diseases associated with spermatorrhœa and impotence; then follows a chapter on continence. The closing chapters of the volume are devoted to classification for treatment, and treatment both general and local of sexual diseases. The mechanical production of the book is good, and the index quite satisfactory.

THIRD ANNUAL REPORT OF THE BUREAU OF ANIMAL INDUSTRY FOR 1887. Washington: Government Printing Office, 1887.

The chief topic of interest in this volume is the investigation into "blind staggers" made in southeastern counties of Virginia and eastern counties of North Carolina, made to the Commissioner, William H. Harbaugh, V. S. Much ground is gone over, and many people's opinions obtained, but there is no explanation of the cause of the disease so far.

The reports on hog cholera and contagious pleuro-pneumonia are accompanied with lithographic illustrations of the pathology of the

diseases and their bacteriology. Much excellent work is done by Dr. D. E. Salmon, in the Government Laboratory of the Bureau over which he presides, and to all physicians and farmers and stock-raisers who visit Washington we would advise them to call and see the laboratory work constantly in progress there.

A REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES. Edited by Albert H. Buck, M.D. Volume VI. PRA-TEP. Wm. Wood & Co., New York.

The interest that has attached to the previous volumes of this great work will be excited anew by this number, embracing so many subjects of great interest, their exposition being in the hands of competent writers.

The article on Pregnancy, by Dr. Theophilus Parvin, is quite full, and, like every other production of his pen, replete with instruction and most charming writing. The article discusses the duration of pregnancy, the change effected by pregnancy, its diagnosis and pathology.

As counter pieces to the article on pregnancy, there are a lengthy one on the Puerperal Condition, covering the whole range of normal and pathological states after the completion of pregnancy by delivery, except Puerperal Fever, which is accorded a separate article—rather shorter and more indefinite than the great importance of the subject would seem to demand. With these sections might be put also the one on Septicæmia, as embracing many of the morbid conditions already studied in the previous contributions.

Under the heading Pulse, we find a curious and interesting series of sphygmographic studies, which make a bright chapter in the book.

Dr. Smart, of the United States Army, has contributed a long and interesting article on Quarantine, comprising its history down to the present day, with a short account of the International Congress of quarantine authorities that convened in Washington in 1881, in which thirty-one governments were represented. Just now this chapter makes interesting reading matter, and along with it may be studied with great profit the contributions to the volume on Sanitary Inspection, Sewage and Sewerage, all of which contain a vast deal of useful matter, well presented, both by the text and illustrations.

Scarlet Fever makes one of the lengthiest essays in this volume, and is very exhaustive in the treatment of the subject, and attention is

likewise directed to the headings, Secretion, Small-pox, Diseases of the Spinal Cord, Stomach and Schizomycetes. The latter article is quite a comprehensive history of bacteriology from its earliest student, Anthony Van Lieuwenholk, in 1675, to the great number of observers that are enriching the literature of this subject so rapidly at this day.

The wood-cuts in the volume are very good, and there are three chromo-lithographs, two of venomous reptiles and one of a patient suffering with tubercular syphilides. To all intents and purposes he might as well have been bitten by the horrid rattle-snake, that is so well pictured, and making the relation of the picture, so far as result to the human kind is concerned, a trifle striking.

The value of these volumes increases with each new issue, and will, when complete, constitute a very valuable and elaborate compendium of medicine, surgery and such of the allied sciences as relate to these great subjects.

It is difficult to choose the important headings in calling attention to this work, and it is more to direct the reading men of the profession to this valuable book than to offer any review of its contents, that we have set it forth in our columns.

CONDITION OF THE GUMS IN YELLOW FEVER.—An old practitioner of medicine and dentistry, Dr. Thomas B. Carr, of Wilmington, desires to know if any physician has noticed the peculiar condition of the gums in this disease, and if any have noticed a pathognomonic sign in their appearance.

DIET TABLES—Issued by Reed & Carnrick, New York.—These diet tables have been revised and corrected by thirty of the most eminent specialists in this country and Europe. They are designed for the use of patients or nurses, and obviate the expenditure of time required in giving directions and answering questions. The selection of foods and the formulæ given are such as must commend themselves to every experienced practitioner. Diet and regimen are given for the various distinct diseases to which flesh is heir, as well as for the disturbed conditions of the system which cannot properly be classified as diseases. The tables will be sent free, on application, and there is no excuse for failure on the part of the practitioner to avail himself of their great aid.—*Medical Age*.

CURRENT LITERATURE.

A NOTE ON THE TREATMENT OF DYSENTERY.

By Surgeon-Major S. L. DOBIE.

The local treatment of dysentery is seldom resorted to, unless as a last resource, except by those who see a good deal of the disease. The orthodox treatment is generally understood to be by large doses of ipecacuanha, in boluses, on an empty stomach, preceded by a dose of laudanum to allay the ensuing sickness.

In India, of late years, treatment by tincture of aconite in small, frequently repeated doses, has been recommended; and a combination of tincture of cannabis indica with tincture of hyoscyamus has been favorably reported upon. It is worth noticing that in these two forms of treatment ipecacuanha, which is generally looked upon as our sheet-anchor in this disease, is omitted. Some five years ago a writer to the *Lancet* advocated the use of nitrate of silver enemata in dysentery. The injections, as far as I can remember, were large ones, and were intended to reach well up the colon. If retained for any length of time, an injection of solution of common salt, to render the nitrate of silver inert, was recommended. Another favorite form of treatment is the washing out of the lower bowel with plain warm water at the beginning of the treatment, and it may be repeated. This generally gives great relief and lessens the tenesmus, which is, after all, the most painful condition of the disease. The use of small opiate enemata, to be retained, with or without ipecacuanha, and administered after each motion, is a form of treatment which affords considerable relief. There can be no doubt that, when once the straining and irritability of the lower part of the rectum are checked or lessened, a great deal has been done toward the cure of the acute disease; and certainly three-fourths of the woes of the patient are at an end. The irritable rectum provoking so many calls to stool, and the violent straining which keeps the patient so miserably fixed there, allow the inflamed bowel no rest, and add fuel to the fire of their own irritability.

In treatment by the mouth, my own experience, during the last

sixteen years in India, has been in favor of small doses of ipecacuanha with Dover's powder, repeated often enough to produce a feeling of nausea without actual vomiting. Latterly I have found the addition of cannabis indica to the ipecacuanha and opium apparently an advantage. It is very likely that treatment by tincture of aconite in small, frequently repeated doses, would lend itself advantageously to cases of acute dysentery in which there is a good deal of fever, but I have no experience of it. But, for checking the irritability of the rectum and the tenesmus, I know of no remedy so wonderful in its effect as enema of nitrate of silver, to which I have alluded. It is a remedy which is known to, and used by many, no doubt. Some cases treated by it have been reported lately in the *Indian Medical Gazette*, but it is hardly as well known as it ought to be. When the stools are frequent, consisting of flakes of mucus stained with blood, and the patient is suffering torments from straining, then it is that the nitrate of silver enema give an extraordinary amount of relief.

Unlike the original writer, to whom I am indebted for this form of treatment, I do not give the enema strong or in large quantity. I use six ounces of water with ten grains of nitrate of silver for each enema. Nor do I trouble myself whether the patient retains it or not; as a rule he does not, but if he does, it is probable that all the nitrate of silver will be converted into an insoluble compound before it can be absorbed. This enema might be given two or three times in one day; but, as a rule one enema allays the symptoms for the day, and does not require repeating unless they become urgent again in a day or so. It commonly happens that after one enema the symptoms are not only allayed, but subside altogether; the bowel has rest, the stools become feculant, and a warm bed and diet complete the cure. And while this treatment is so good in an acute attack, it is almost our last resource in those chronic cases so often seen among worn-out invalids sent from India, utterly broken down. In them the thinned mucous membrane, studded with ulcerated patches, is directly benefited by the local application of the nitrate of silver; and here we may lose a larger quantity of the enema, and may try to eject it well into the colon. It is encouraging to find how amenable to this treatment is the long-continued, exhausting discharge, which no medicines and no diet seem to control.

In the chronic diarrhœa which sometimes attacks those long-resident in the tropics, or which is a *sequela* of dysentery, in the uncontrollable

diarrhœa which often accompanies exhausting diseases, and in the obstinate diarrhœa of infants, so fatal and so often met with in India, the nitrate of silver enema is extremely useful. I may add that my experience of this as a remedy for dysentery, acute and chronic, has been limited to the last five years or thereabouts, and it has been principally among insane natives, a class peculiarly liable to the disease, in the Madras asylum, among native soldiers at Suakin, and among the well-to-do Europeans at a hill station in which dysentery is prevalent.—*London Lancet*.—*American Practitioner and News*.

DANGER FROM THE USE OF COCAINE.

A considerable amount of evidence has now been adduced as to the dangerous effects of this much-used drug. It is seen that even in ordinary, and what are usually safe doses, serious and fatal consequences have been produced.

Cocaine is used very rarely by the stomach. It is usually applied in solution of various strength to a part, less often it is administered hypodermatically. Its ill effects have been witnessed in both modes, but especially in the latter, doubtless because thus a larger quantity gains admission to the circulation. The earliest experiments led observers (Merck, Da Costa, Ott) to regard it as a cardiac stimulant; Da Costa's studies led him to suggest its use "in many a condition of collapse, of weak heart or heart failure, and in low fevers."

Further experience shows that quite the opposite effect is to be anticipated. This divergence may be due to a difference in the quantity used now and formerly.

The toxic effects have manifested themselves in a tendency more or less marked to collapse. They come on very suddenly, usually within a brief period after administration, and consist of great weakness and frequency of the heart's action, pallor or cyanosis, faintness, prostration, perspirations, dyspnœa, sighing, slow and irregular breathing, a sense of fulness in the head, vertigo, dilated and fixed pupils, mental excitement, indistinct speech, tingling sensations, staggering gait, nausea, vomiting, delirium, convulsions, coma, apparent death, real death. The milder of these were noted

shortly after the introduction of the agent four years ago, but observers were too much dazzled then with its marvelous effects to lay much stress on them, and they were considered as but fleeting in character and leaving no after-effects.

It is somewhat remarkable that the conjunctival surface seems to enjoy an immunity to the ill-effects of the drug as compared with other mucous surfaces. If we may judge by the cases which we have collected, the nose and the urethra seem to be particularly susceptible. Toxic effects are noted from a 4 and 5 per cent. solution on lint to the interior of the nose; from a 2 to a 20 per cent. spray to the nose and larynx, and from a four and 20 per cent. solution into the urethra. Even the cavity of decayed teeth is not exempt from this susceptibility, extreme symptoms being reported from 3 drops of a 20 per cent. solution applied on cotton (NORTH CAROLINA MEDICAL JOURNAL, July). Epileptiform convulsions have been reported from applications to the urethra and from subcutaneous injections of $\frac{1}{2}$ grain, or even less, to 5 grains, by Earle (*Maryland Medical Journal*, January 15th and March 19th, 1887), Harrison (*Daniel's Texas Medical Journal*, June, 1888), Slayter (*British Medical Journal*, February 25th, 1888), and Simes (*Medical News*, July 21st, 1888).

The first three of these were hypodermatic administrations; the last, which alone proved fatal of all the cases in our collection (although "several well authenticated fatal cases are on record") was one of application of one drachm of a 20 per cent. solution to the urethra, preparatory to an internal urethrotomy for stricture. "The instrument had scarcely been taken out of the urethra when the patient made a foolish remark, the muscles of his face began to twitch, the eyes staring, pupils dilated, frothing at the mouth, face much congested, respiration interfered with and ending in a violent epileptiform convulsion, lasting for some seconds. These convulsions were continued with increasing violence, several times a minute, the whole muscular system taking part in the spasms, requiring considerable force to keep him from falling off the table. The action of the heart was not interfered much interfered with, and appeared only to be secondarily affected. It was the respiratory function that seemed first to fail, and then the heart's action became irregular and slow. The breathing was more and more interfered with, in fact, the entire surface of the body became deeply cyanosed,

the pulse slow, and at the end of twenty minutes from the first convulsion had ceased to beat. The man was dead."

Everything was promptly and efficiently done, but nothing had any influence over the result. On post-mortem the brain, liver, lungs and kidneys were found to be congested; the heart was normal. The urethra was examined for rupture, but nothing found.

Dr. J. Clark Stewart (*Medical News*, August 18th) reports a case of epileptiform convulsions following an injection of one and a half drachm of a 4 per cent. solution of cocaine hydrochlorate for the same operation and disease as in Dr. Simes' case. In this case, however, unlike the others, there was a previous history of *petit mal*, and the reporter thinks the cocaine may have simply acted as the exciting cause of a major attack in a person already suffering from the disease.

Experiments upon animals showed identical results from single injections; when the injections were repeated in small amount the post-mortem revealed marked congestion of the nerve centres, albuminoid degeneration of the cord and ganglia, fatty degeneration of the heart, atrophy of the liver, etc.

Locally inflammation and gangrene have been reported as resulting from the use of cocaine, and we may further note the evils of its habitual use. Dr. Orpheus Everts, Superintendent of the Cincinnati Sanitarium, in his annual report, says that further observations confirm his previously expressed opinion that it is a fascinating and dangerous drug to persons of unstable or neurotic organizations, especially to those liable to become drunkards or opium-eaters.

Among remedies employed in the treatment of cocaine poisoning stimulants naturally hold a permanent place, as ammonia, alcoholics, ether and digitalis, by injection, inhalation or internally, mustard and hot applications externally. Subcutaneous injections of morphia have been found useful, but the remedy above all others, as might be inferred from its well-known effects and from the symptoms and post-mortem appearances, is nitrite of amyl, inhaled. This seems to have been uniformly successful whenever used. Dr. Simes does not state whether he used it or not. In one case the reporter, Dr. L. G. Broughton, of North Carolina, thinks that he saved his patient by the hypodermatic injection of 1-100 grain of strychnia. He had, however, previously used brandy in large quantities by the mouth and hypodermatically.

In studying the above and other cases that have been reported, we may, perhaps, venture to formulate some conclusions, viz :

1. Certain persons possess an idiosyncrasy to cocaine which cannot be foreseen or entirely guarded against.

2. Cocaine exerts its toxic effects upon the nervous centres and secondarily the heart.

3. Its evil effects are most liable to be seen in neurotic subjects.

4. The danger in cocaine poisoning is mainly from paralysis of the heart, syncope.

5. It may be well to precede its use by the administration of alcohol or other cardiac stimulant as is done with chloroform.

6. Special care is needed in "weak heart" and organic heart disease.

7. The subcutaneous administration is dangerous and should be avoided.

8. The use of the stronger solutions is dangerous and unnecessary.

9. The treatment of cocaine poisoning consists of measures to rouse the heart, especially inhalations of nitrite of amyl.—*Editorial in Maryland Medical Journal.*

ARTIFICIAL GLYCOSURIA PRODUCED BY THE SALICYLATES.

It is well known that the urine of patients under full doses of salicylic acid or the salicylates will often exhibit the reaction for sugar by Böttger's, Trommer's and other tests, but until recently the reducing agent was thought to be salicylic acid or one of the products of its decomposition. It has lately been shown that such urine will ferment with yeast, losing several degrees of specific gravity, and that the presence of sugar and its amount can be shown by accurate quantitative methods. Burton (*Lancet*) recently examined the urines of twelve persons who were taking large doses of salicylic acid, sodium or phenol salicylate, and invariably found sugar present, though often in very small amounts—the largest being gr. vj to the $\frac{3}{4}$ j. The glycosuria, which is temporary, he surmises results through the action of salicylic acid on the diabetic centre, and that the benefit obtained by its administration in some cases of diabetes may be due to the opposite action of small and large doses.—*The Polyclinic.*

TOBACCO—ITS USE AND ABUSE.

By C. W. LYMAN.

There are 5,250,000 acres of land in the world given up to the cultivation of tobacco. As this plant will not grow in a poor, or even in a medium, grade of soil to any advantage, it follows that these acres represent the richest agricultural lands. Tobacco being a very exhausting crop to the soil, these acres must be extensively and frequently fertilized, or the plant must be cultivated in new soil. In France and Austria tobacco is classed as a luxury, and both its manufacture and sale are monopolized by the government. The income so derived is said to be great and without much variation. In the United States the internal revenue on tobacco is more than forty millions of dollars.

Tobacco contains an acrid, dark-brown oil, an alkaloid, nicotine, and another substance called nicotianine, in which exist its odorous and volatile principles. This description of the active principles of tobacco is of importance to smokers, for, when tobacco is burned, a new set of substances is produced, some of which are less harmful than the nicotine and are more agreeable in effect, and much of the acrid oil, a substance quite as irritating and poisonous as nicotine, is carried off. These fire-produced substances are called, from their origin, the pyridine series. By great heat the more aromatic and less harmful members of the series are produced, but the more poisonous compounds are generated by the slow combustion of damp tobacco.

Now, this oil which is liberated by combustion is bad both in flavor and in effect, and it is better even for the immediate pleasure of the smoker that it should be excluded altogether from his mouth and air-passages. Smoking at its best is well described by Mrs. Harriet Martineau, who acquired the habit in Egypt during her voyage up the Nile. The small bowl of the chibouk used by the Arabs is attached to a stem several feet in length, in the interior of which all the poisonous oil is condensed and deposited. By inserting a small piece of cotton into the stem each time the pipe is used, or by drawing the smoke through water, the smoker may evade the bad effects produced by the oil. This chibouk was smoked only in the evening after dinner. Mrs. Martineau thought that her health im-

proved while using it, and she continued in the habit after her return from the East. But ordinary pipes, especially old pipes, are without excuse. The tobacco smolders in the large bowl, the more harmful vapors of the pyridine series enter the mouth and throat, the oil saturates the bowl and stem, and after that enters the mouth with the smoke.

Smoking in a stub of a pipe is particularly injurious, for the reason that in it the oil is stored in a condensed form, and the smoke is therefore highly charged with the oil. Sucking or chewing the stub of a cigar that one is smoking is a serious mistake, because the nicotine in the unburned tobacco dissolves freely in the saliva and is absorbed. "Cheeking" is on this account the most injurious form of the tobacco habit, and the use of a cigar-holder is an improvement on the custom of holding the cigar between the teeth. Cigarettes are responsible for a great amount of mischief, not because the smoke from the paper has any particularly evil effect, but because smokers—and they are often boys or very young men—are apt to use them continuously or at frequent intervals, believing that their power for evil is insignificant. Thus the nerves are under the constant influence of the drug and much injury to the system results. Moreover, the cigarette-smoker uses a very considerable amount of tobacco during the course of a day. "Dipping" and "snuffing" are semi-barbarities which need not be discussed. Not much effect is obtained from the use of the drug in these varieties of the habit.

With thousands of men about us all the time who are taking daily full doses of this drug tobacco, many of whom are willing to testify as to their experience, it apparently should not be difficult to arrive at exact conclusions as to its effect on the human organism. Yet it is a fact that very different opinions in regard to tobacco are current. It is the object of this paper to connect a series of facts which are well established, and to give to the different facts in regard to tobacco their relative importance.

Now, the effects of bringing tobacco by any method into contact with the tissues of the body are more or less modifications of what pure nicotine itself does when the body falls under its influence. So that, after admitting that one method of using tobacco may be worse or better than another, it is perfectly fair to examine all of them at the same time by an inquiry into the actual effects of nicotine.

Nicotine is one of the most powerful of the "nerve poisons" known. Its virulence is compared to that of prussic acid. If birds be made to inhale its vapor in amounts too small to be measured, they are almost instantly killed. It seems to destroy life not by attacking a few, but all of the functions essential to it, beginning at the center, the heart. A significant indication of this is that there is no substance known which can counteract its effects; the system either succumbs or survives. Its depressing action on the heart is by far the most noticeable and noteworthy symptom of nicotine-poisoning. The frequent existence of what is known as "smoker's heart" in men whose health is in no other respect disturbed is due to this fact.

Extreme faintness and giddiness, followed by an indescribable feeling of sinking and misery, and then horrible nausea, vomiting, and great muscular weakness, are caused by even moderate doses of the drug. Tobacco, after the habit of using it is formed, is a cerebral stimulant. The exhilarating effects produced by the drug are evidently due to the excitement attending the resistance offered by the life-force to the attack of a foreign or noxious element present in an amount not too great to be overcome. Were there present a little too much of this poison, life is either destroyed or a long time is required in which to repair damages. Can any one believe that the smaller dose can give any real increase of power, and that the larger one can take it away in so alarming a manner? Now, some idea of what effect the smoke of burning tobacco can produce in a human body may be conceived by a glance at the results of its long-continued use in the cases of "those who are hurt by it," as the expression is—that is, in that large majority of smokers who use it in excess, as an habitual indulgence with a direct view to pleasure; not as the Arab uses his after-dinner chibouk, nor yet as a means of modifying discomfort on particular occasions. In the strongest men, those with much of what we call "surplus" vitality, tests must be delicate. The apparent absence of effect in these unusually powerful men is constantly instanced by deluded friends of tobacco, implying by this act that they believe that if it does not injure one man it cannot badly injure another. But in those who have not enough vitality to resist the effect of the amount of tobacco they use, whose general good health cannot, at least, be supported at the same time, results are evident and very noticeable.

and yet they need not necessarily be of an apparent variety at first. A healthy body is elastic, and resists injurious influences up to a certain point. It may be that the more marked results will only appear after a number of years' use of the pipe or of chewing tobacco. Dr. Franzel, of Berlin, observes that in his country immoderate smoking agrees, as a rule, with persons for many years, although by degrees cigars of a finer flavor are chosen. But at last, suddenly, and without any other assignable cause, trouble with the heart begins, and a physician is consulted. These troubles seldom begin until the smoker has passed his thirtieth year, and usually appear at an age between fifty and sixty years. The Germans are less nervous and heartier than are their descendants, after a few generations of residence on this side the Atlantic have made them Americans. Another result may be seen in the case of a certain well known chemist, a man of great energy and large attainments in science, who chewed tobacco, and had been addicted to the habit for a long time. In chewing, depression of spirits and dullness of mind were the final results. This eminent chemist says that of late years, though obliged to take his tobacco regularly, he ordinarily gets no pleasure from its use; rather the reverse. However, once in a week or two, for a single morning, he will experience the old pleasure. It soon passes away, and to it succeeds another period of slavery and great discomfort.

Another class of people cannot resist the effects of tobacco at all, cannot form the habit, or even stay in a room in which there is tobacco-smoke. It is a well-established rule that no tobacco may be used by a man who is training for an athletic contest. Such a man is usually one of the toughest and strongest, a pugilist or professional oarsman, and possessing great physical endurance. Those who can use tobacco without immediate injury will have all the pleasant effects reversed, and will suffer from the symptoms of poisoning if they exceed the limits of tolerance. These symptoms are: 1. The heart's action becomes more rapid when tobacco is used. 2. Palpitation, pain, or unusual sensations in the heart. 3. There is no appetite in the morning, the tongue is coated, delicate flavors are not appreciated, and acid dyspepsia occurs after eating. 4. Soreness of the mouth and throat or nasal catarrh appear and become very troublesome. 5. The eyesight becomes poor, but im-

proves when the habit is abandoned. 6. A desire, often a craving desire, for liquor or some other stimulant is experienced.

A lesser degree of injury may be shown by general restlessness, insomnia, depression of mind, or the development of a dull or irritable temper. Any man who enjoys his tobacco more with a glass of beer or spirits has a heart the action of which has been weakened by the use of tobacco.

A finer and very certain test is that the desire for the society of women is no longer felt as it may once have been. The dreamy and solitary enjoyment of a good cigar takes the place of social pleasures. It is reasonable to assume that the "Reveries of a Bachelor" were tobacco visions. The immediate result of addiction to the use of this drug is felt by women, who very commonly recognize in tobacco a direct enemy to their influence with men. A most ennobling element in social life is thus impaired. Another and most deplorable result of the tobacco habit is that the children of an apparently vigorous man who is addicted to the use of tobacco in some form will often show the symptoms of tobacco poisoning from which the father had never suffered. The general health of these children will be poor as compared with that of the father, the circulation will perhaps be poor, and the face will be pale; there will be a tendency to catarrh, somewhat nervous, unhappy, cold or joyless disposition, weak digestion, or a taste for dainty and stimulating food. The father, perhaps, will nevertheless tell you sincerely that he had still to find that the use of tobacco was injurious to him; that, on the contrary, he obtained much comfort from it.

The finest test of all is of a somewhat ethical nature, it is true, for it has to do with that element which is last developed in the nature of man—religious emotion, taken in the broad significance of the term. The strictly scientific investigators of this subject have stopped at this point with the remark that they were not dealing with ethical questions or results involved, but only with those of a physical nature. But, believing that these cannot be separated, and not being limited to the use of medical terms in a discussion so general as this, a few facts come into place here. It was a matter of fixed belief with a celebrated clergyman that the amount of Christianity a man could receive into his soul had a very close dependence upon the state of his liver. On the other hand a professor connected with a prominent medical college, while lec-

turing on disorders of the liver, stated that the use of tobacco, in even the smallest amount, impairs the functional action of the liver on the blood passing through it, and that the abnormal state of the blood thus caused will manifest itself by disturbance in the brain. When a patient is found to have this form of cerebral disturbance, to stop his use of tobacco at the outset of treatment is a *sine qua non*. These two statements of leading authorities seem to connect themselves.

On growing boys and on young men under twenty-five years of age the use of tobacco is known to cause notably bad effects in almost every instance. Especially is this so if the food be scant. The injury which is ultimately done is probably not greater than in the case of the adult who has come into his full powers of resistance to the effects of the drug; there is simply more to be used in the latter instance, especially the force which nature intended to give to the succeeding generation. It is from this fact that an idea is current that smoking indicates manliness of character, and to the force of social opinion on this point among young men must be credited no small portion of the number of recruits which are annually added to those who use tobacco.

In an experimental observation of thirty-eight boys of all classes of society and of average health who had been using tobacco for periods ranging from two months to two years, twenty-seven showed severe injury to the constitution and insufficient growth; thirty-two showed the existence of irregularity of the heart's action, disordered stomachs, cough and a craving for alcohol; thirteen had intermittency of the pulse; and one had consumption. After they had abandoned the use of tobacco, within six months' time one-half were free from all their former symptoms, and the remainder had recovered by the end of the year.

It is not difficult to break the habit if the mind be diverted and the food be good. There is no constitutional reaction, as is the case when the use of opium or alcohol is abandoned; but the strength begins to improve, and the ability to sleep, digest and see improves at once. While this is so commonly true as to have justified the statement that "the habit is, physiologically, not hard to break," it is to be noted that in men whose constitutions are thoroughly shaken and undermined by the effects of tobacco, an attempt to abandon its use is sometimes accompanied by tremor and a feeling of general

misery which are practically intolerable. Such persons are indeed slaves to the habit. However, it is worth repeating that complete diversion of the mind (not always an easy thing to bring about) and good feeding are enough in most instances to make the abandonment of the habit easy.

The pleasant effects of tobacco are realized only after the habit is formed. Tobacco is not alone in the possession of this quality; it is much better known in the case of tobacco than in the case of some other drugs producing similar pleasurable effects. But it is believed that if any of the nerve-paralyzers were taken for a long time in minute doses until an habitual resistance was established, that drug would finally act as a stimulant, and a certain pleasurable excitement would accompany the effort which the body had learned to make in throwing off its influence. In Africa the *Physostigma venenosum*, or "judgment bean," used in the trial of witches, has also been put to this use of a stimulant by a few.

The only question about tobacco which is really in need of a settlement is the following, and it is important that it should be dealt with justly, namely: "Is there, after all, such a thing as a genuinely temperate use of tobacco? Perhaps; perhaps not. The answer depends largely on the degree of health which one judges to be the normal standard for the individual, especially in those cases in which, on account of other reasons, a state of either absolutely perfect, or even of good health, is out of the question. Few people know what are the sensations and general state of consciousness proper to a completely temperate way of living after the period of childhood has been passed. Their habits of life, and especially their habits of thought, once having been unnatural as a result of the artificial conditions of civilization, competition and particular callings, debility and the wear of rapid living, and their feelings and senses having been altered, a new estimate of what it is to feel well is made. Different tastes and new needs, never before known to a body that is, as trainers express it, "pure," arise. Particularly does a craving come for some means of abolishing sensation at times when sensation is not exactly agreeable, and of blunting the edge of a too insistent voice of mental consciousness busy over the cares of the past and of the coming day. Or it is a hungering for something to relieve the *ennui* of solitude or of uncongenial society, or the worse *ennui* of having no aspirations or necessities that force

the employment of the energies. Now, for many, tobacco satisfies this want for the time—that is, it seems to do so by its immediate effect. If the great mass of men, as men now are, could obtain no tobacco, some other narcotic more or less its equivalent would certainly be found and used. A fact sad enough, but a fact it is, that they “must have something.” There is no physician who has not heard these words more times than he can remember.

Now, scientific men have decided that there is a class which, in this attempt to overcome sensibility to unpleasant conditions, do get apparently beneficial effects from tobacco, inspection not being too close. In many, they report, no immediately evident injuries appear from the use of tobacco by adults past the most vigorous period of life if taken in small amounts at intervals, and rather long intervals. It is said that under these conditions it may be used to take away, by its stimulus to the heart and nervous system, the unpleasant sensations arising from fatigue, poor food or lack of food, exposure, strain or worry. So employed, it then gives aptitude for work; quiet, and good digestion after severe labor; bodily energy when food or sleep cannot be had.

As illustrating this favorable action, both English and American authorities instance the case of a sportsman whom the afternoon of a day in the field finds miles from home, beginning to feel faint for want of food, and somewhat fatigued. A few minutes' smoking removes all sense of hunger and “goneness,” and restores elasticity to his limbs. It is thus like opium and coca in seeming to arouse active vital processes, and to restore a normal rhythm. A closer question arises in many minds in such a case whether the body and brain will suffer more by allowing hunger, discomfort or mental depression to continue than from the drug which intervenes with its action, and prevents their being felt.

Tobacco will often thus have the immediate advantage of giving comfort, and, with this in view, it now forms part of the regular ration in the German army. They find that soldiers will go through the hardships and anxieties of a campaign better with it than without.

Used occasionally under such unusual circumstances as have just been indicated, and by a man of mature years, good constitution and out-door occupation, it would necessarily be hard to measure what amount of detriment his total of health sustained. His abun-

dant vitality would easily cover up small losses from any ordinary or immediate tests, and they are the only sort which most people have any disposition to make in a matter involving their daily comforts, whatever they may suppose *them* to consist in. It would show, however, if he engaged in a boat-race, or underwent a severe surgical operation. But the number of those who confine themselves to such a comparatively temperate use of tobacco is not large. A great majority go far beyond any such limitations, and evidences of injury are easily found. It is only necessary to have some record of what the general health was previous to the taking up of the habit, and to have observation cover a long enough time. The history of tobacco in the island of New Zealand furnishes a quite suggestive illustration for our purpose, and one on a large scale. When Europeans first visited New Zealand they found in the native Maoris the most finely-developed and powerful men of any of the tribes inhabiting the islands of the Pacific. Since the introduction of tobacco, for which the Maoris developed a passionate liking, they have from this cause alone, it is said, become decimated in numbers, and at the same time reduced in stature and in physical well-being so as to be an altogether inferior type of men.—*New York Medical Journal*.

SWINE PLAGUE.—The University of Nebraska has issued a large volume containing laboratory work of Frank S. Billings, Director of the Patho-Biological Laboratory of that institution. Students in this department of pathology have large advantages in being able to follow a disease through all its stages, and finish by a deliberate post-mortem examination of diseased tissues. It is comparatively new work, and the germ theories, with all of their puzzling phenomena, have to be settled as they go along. It is from honest, patient toil in these laboratories that some theories may be settled and some practical deductions arrived at, but the spirit must be that of scientific students, with as little of personal conceit as one can get along with. The spirit in which Dr. Billings writes against theories not his own detracts from his otherwise good work. Let him give the public facts and true observations, and he can depend upon the thinking men who read them to arrive at conclusions. Dr. Salmon is nobody and neither is Dr. Billings as compared with the work they are entrusted with, and the public will write their great names on the scroll of fame after they have done something worthy of it.

NOTES.

MICROSCOPE FOR SALE.—Dr. Joseph R. Campbell, of Salisbury, has a microscope which cost him \$52.50 that he now offers for \$36. Apply to him as above.

TINCTURE OF LIATRIS ODORATISSIMA, OR DOG TONGUE, is very useful to cover the odor of iodoform; a fluid extract is better. The good effects are due to coumarin, with which the liatris abounds.

ACETANILID (antifebrin) given in combination—dose 5 grains of the drug to 1-16 grain of morphine—is a very desirable combination in phthisis. The addition of morphine lessens the sweating, in some patients checking it altogether.

METHOD OF STAINING BACTERIA FOR DIAGNOSTIC PURPOSES.—In the August number of the *Brooklyn Medical Journal* there is a practical article on staining for the detection and examination of bacteria, by Joseph Ketchum, Esq. It is plain and practical, and we commend it to the workers with the microscope in the new Microscopical Society.

THE “operative furor” which has of late attacked certain narrow gynæcologists, who hold the general practitioner in high contempt for charging general systemic effects on systemic causes, is something startling to the average medical mind. At a recent meeting of the Chicago Gynæcological Society, uterine appendages were presented, with a mien of triumph befitting a Sioux Indian waving a scalp in the air. The appendages were carefully examined by Dr. Jaggard, an able gynæcologist, who was unable to discover the slightest trace of disease. This fact was admitted, but the appendages were then said to have been removed for dysmenorrhœic and neuralgic symptoms, treated gynæcologically for two years without success. The local treatment was finally supplemented by the removal of the appendages. A case like this would have been treated by scientific gynæcologists, like Goodell, or by any general practitioner, on the theory that the symptoms were of systemic origin, and cured. Such a procedure would not, however, have had such brilliant financial success. The average gynæcologist is very fond of calling for malpractice suits, to punish neglect of gynæcological procedures by general practitioners. The present case seems to call for such suits against “professors” guilty of the charlatan-like dodges here described.—*Medical Standard*.

REFORM IN THE GRADING OF LENSES.—Prof. Dudley S. Reynolds, of Louisville, editor of *Progress* proposes a new mode of grading lenses. He proposes, instead of taking the quadrant of the sphere as a unit of refraction, to begin with the lowest perceptible angle of refraction, and calculate by that means alone the refracting power of the whole series from 5' to 90°.—*The Journal*.

DISEASES OF THE LIVER, by Prof. Du Jardin Beaumetz, is one of the Physician's Leisure Library just issued that will be of much interest to the profession. Mr. George S. Davis, of Detroit, is issuing some good little volumes at such a reasonable price (25 cents a copy), that they ought to meet with a large sale. They are just the size to slip in the pocket to be read on a journey by rail.

POSTURE IN LABOR.—Dr. Francisco*Alonso Rubio, in a paper read before the recent Spanish Gynecological Congress, laid great stress upon the important part that the posture of the patient plays during labor, both physiological and abnormal. During the first stage he merely keeps the patient from going from one room to another to avoid catching cold. During the expulsive stage, though he prefers the supine, or at least a horizontal, position as a rule, he changes it to a sitting posture where there is asthma or cardiac weakness, also where the pains have become inert through uterine fatigue. Where there is any version of the uterus, it is necessary to pay due regard to its direction. Thus if there is anteversion, the patient should be placed on her back; if there is lateral version, she should lie on the side opposite that to which the fundus uteri is inclined, so as to bring the foetal axis to coincide as nearly as possible with that of the pelvis. It is, of course, a recognized fact that a change of posture will frequently facilitate the descent of the head, even when there is no abnormality either in the position of the child or of the direction of the uterine axis. When the foetal position is transverse, the patient should be laid on the side opposite to that occupied by the head, with a pillow under the abdomen. The adoption of the genu-pectoral position has frequently been found of service by Dr. Rubio. When there is prolapse of the cord, and it is being dragged upon in a dangerous manner, he raises it above the head and keeps it there during several pains, the woman being placed in the genu-pectoral position. Again, in complicated presentations, he has found this the best posture for their

reduction, and in arm and shoulder presentations, where the amniotic liquid has escaped, and the practitioner in attendance has been unable to insert his hand and turn, Dr. Rubio, by the adoption of this position, has found it possible to execute the necessary manœuvre.—*Lancet*, July 28, 1888.

ANTISEPTIC SOAP.—Prof. Auguste Neverdin recommends the following formula for the manufacture of a reliable antiseptic soap: Sweet oil of almonds, 72 parts; soda lye, 24 parts; potash lye, 12 parts; sulpho-carbolate of zinc, 2 parts; essential oil of roses, 9.5 parts.

DR. CARL SEILER'S ANTISEPTIC SPRAY FOR REDUCING ACUTE AND SUBACUTE INFLAMMATION OF NASAL MUCOUS MEMBRANE.—We find the following in the *Medical Age*:

℞.—Sodii bicarb., 3 viij.
 Sodii bibor., 3 viij.
 Sodii benzoate.
 Sodii salicylate, ää gr. x.
 Eucalyptol.
 Thymol, ää gr. x.
 Menthol, gr. v.
 Ol. gaultheria, gtt. vj.
 Glycerin, ℥ viiiss.
 Alcoholis, ℥ ij.
 Aquam, q. s. 16 pints.

This formula gives a solution which is sufficiently alkaline to dissolve the thickened secretion adhering to the nasal mucous membrane, and as it is of the proper density, it is bland and unirritating, leaving a pleasant feeling in the nose. At the same time it is antiseptic and acts as a deodorizer, being in this respect far superior to Dobell's solution or any other non-irritating deodorizer and antiseptic. As it is, however, inconvenient for many patients to have so large a quantity of solution on hand, one of our Philadelphia druggists made the solid ingredients into a compressed tablet, so that one, when dissolved in two ounces of water, will make a solution identical in its effects with the solution made after the above formula—and my patients prefer the tablets to the solution.

IN the treatment of congested and irritated bronchial mucous membranes, Dr. William Murrell, of England, employs ipecacuanha spray, the wine of ipecacuanha, either pure or diluted with an equal quantity of water, being applied either by a steam vaporizer or the ordinary hand-ball spray apparatus.—*College and Clinical Record*.

THE TREATMENT OF SLEEPLESSNESS.—Recipes for sleeplessness are constantly presenting themselves. About a fortnight since we discussed the suggestion of a sufferer from this uncomfortable symptom who relied upon a species of artificial dreaming as a means of relief. Another of the same unfortunate class has found the following to be an effectual remedy in his own case. After taking a deep inspiration he holds his breath till discomfort is felt, then repeats the process a second and a third time. As a rule this is enough to procure sleep. A slight degree of asphyxia is thus relied on as a soporific agent, but the theoretical correctness of this method is somewhat open to question. Certainly there is proof to show that the daily expenditure of oxygen is most active during the waking period, and that nightly sleep appears to coincide with a period of deficient tissue oxygenation. It is at least as probable, however, that other influences are associated with the production and timely recurrence of sleep besides that just referred to. This plan, moreover, however effectual and beneficial in the case of its author, is not without its disadvantages. The tendency of deficient oxygenation is to increase blood-pressure and to slow the heart's action. With a normal organ, as an occasional occurrence this might not be of much consequence. If, however, the impeded heart should also be enfeebled by disease, the experiment might be repeated once too often. Another combatant in the struggle with insomnia lays down a series of rules, for the most very sensible, to which he pins his faith. Considering that the chief causes of sleeplessness are mental worry and the want of a due amount of exercise and fresh air, he advises his fellow-sufferers to observe the ordinary rules of hygiene relating to such matters, to take food and drink in moderation, and to avoid of an evening the use of tea, coffee and tobacco. In dealing with severe nervous irritation from mental or physical work, he has found a daily rest an almost essential prelude to sleep at night. Thus he treats of sleeplessness rather as a tendency requiring constitutional remedies than a symptom of mere brain excitation. There is much to be said for his theory and means of treatment.—*Lancet*.

PROF. JACCOUD (*Brit. Med. Journal*) recommends a copious diluent draught and an exclusive milk diet in the treatment of gout; in cases in which there is considerable fever he gives a small quantity of hydrate of bromal. Preparations of colchicine and of salicylate of soda, though excellent as anæsthetics, are to be avoided. In patients affected with interstitial nephritis these substances produce most serious toxic symptoms.

READING NOTICES.

J. H. HUTCHINS, M.D., Hampton, Ia., writes: "I can unqualifiedly recommend Lactated Food as a food for infants and as a positive remedy for diarrhœa and dysentery. I have just gone through an epidemic of the two diseases, and have learned to rely on Lactated Food with more confidence than I have been able to place upon any one remedy heretofore used in my practice."

WHAT COCAINE TO USE.—There are many brands of Cocaine in the market, and many physicians have found to their annoyance that some are inert and some very irritating when applied to a sensitive membrane. It may therefore be of service to physicians to learn the experience of Dr. Dudley S. Reynolds, editor of *Progress*, who in the July, 1888, number expresses himself in this wise: "The medical profession has about settled its estimate of the therapeutical value of muriate of cocaine, but it is, unhappily, no easy matter to decide upon the most uniformly reliable source of supply. The editor of *Progress* had about concluded Merck's was the only reliable product, when recently he was induced to make trial of that produced by Parke, Davis & Co. A fresh sample of ten grains was dissolved in five drachms of distilled water, to which was added one drop of liquid carbolic acid. One drop of this instilled into the eye of a man from whose cornea a foreign body was to be removed, produced complete anæsthësia in three minutes, so that incision of the inflamed cornea, and turning out of the piece of offending metal was not felt by the patient. Twenty other similar experiments yielded similar results."

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THOMAS F. WOOD, M. D.,
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ORIGINAL COMMUNICATIONS.

REMOVAL OF A MESENTERIC TUMOR BY ABDOMINAL SECTION, WITH RECOVERY.

By CORNELIUS KOLLOCK, A.M., M.D., Cheraw, S. C.

(Read before the Medical Society of the State of North Carolina
at Fayetteville, May 8, 1888.)

On the 6th of January, 1888, I was consulted in the case of J. H. G., a white boy, aged 14 years, small of his age, pale and cadaverous in appearance, general health very bad, appetite and digestion much impaired, constipation almost continuous. For the last six months there has been more or less fever almost every day of a low type. There was a good deal of distension in the right umbilical region. The distension was somewhat conical in shape, and seemed to incline to the right side. Fluctuation was very perceptible; the wave-tap being unusually strong.

At this examination of the case the following history was obtained from the parents of the patient and the attending physician. While riding in a heavy two-horse wagon on the 20th of May, 1886, the horses took fright and ran away. The patient, in attempting to get out of the wagon, fell between the wheels, and the hind wheel passed over his body, bruising the skin and muscular tissues of the abdominal walls very much. According to the statement of the parents and attending physician the wheel of the wagon passed obliquely over the body, contusing the parts in the center and on the side next to the liver, more than those on the opposite side. As the wagon was very heavy and the horses moving rapidly, the contusion must have been deep, extending to the adjacent viscera. Although there was much suffering at the time of the accident, and great tumefaction and tenderness of the parts for some days afterwards, the patient was not confined to his bed or room for any great length of time. In the course of a month, after all signs of the injury had disappeared, the general health began to fail, and there was soon evident fullness over the region of the parts injured. This continued to increase gradually till I first saw the case on the 6th of January, 1888, nearly two years after the accident.

As all signs, rational and physical, clearly indicated the presence of a cystic growth, I decided at once upon an operation, that seeming to be the only procedure that promised radical relief. I first introduced a large aspirating needle, but the fluid was so thick only a small quantity could be obtained in this way. The patient now being thoroughly under the influence of chloroform, an incision of three inches in length was made, extending obliquely, from a point near the pyloric orifice of the stomach towards the umbilicus. Being thus enabled to introduce my fingers into the cavity, I learned the size, situation and points of attachment of the tumor. I am not quite sure that I am correct as to the pathology of this growth. It seemed to be an exudation cyst, composed of double folds of peritoneum, lined with a fluid-secreting membrane. The membrane lining the sac was rough, corrugated and thick, resembling the inner walls of the gizzard of a fowl. Over the tumor lay the omentum, which adhered to its surface and also to the peritoneum; and the folds of the omentum adhered together, so that the tumor was attached to the anterior portion of the peritoneum by the intervention of the adhering omentum. Posteriorly it was attached by a

sort of pedicle, thick, broad and about an inch and a half in length, to the right side of the spinal column, a little above the kidney. This pedicle was made up of a peculiar organized tissue, filled in with blood-vessels and lymphatics. A trocar was now introduced, and a thick, dark and greasy-looking fluid, with an admixture of pus, and what seemed to be bloody serum, was drawn out. None of the adhesions were very firm—all were easily broken up.

Fearing the numbre and caliber of the vessels necessary to the support of this mass would be found to be large, and that extra precaution should be exercised to guard against secondary hemorrhage, I first applied strong clamps to the pedicle before dividing it. Where the pedicle was cut, two large arteries presented their open mouths. They were drawn out and separately ligated with strong white silk ligatures. Not wishing to take the slightest risk of secondary hemorrhage, the mouths of the vessels were lightly touched by the actual cautery.

The cavity being thoroughly cleansed with hot carbolized water, the opening was closed by five silver sutures, secured by shot. The dressing was light and simple, consisting of bats of salicylated cotton and a compress, supported by adhesive strips. The incision healed by first intention, and the sutures were removed on the seventh day. The patient made a quick recovery. This tumor weighed nine pounds.

It is now about four months since the operation and the patient's health is excellent. Appetite and digestion are good and the boy is bright and cheerful; the cadaverous look is replaced by a clear and ruddy complexion.

I must think that the injury sustained by this accident was the cause of the tumor, for it made its appearance so soon afterwards, and just at the point where the wheels of the wagon passed over the body of the patient.

There will hardly be a recurrence of this tumor, for there is at this time no indication of anything of the kind. Besides, experience teaches that such growths are rarely, if ever, reproduced. The fact of there being no constitutional feature in the case, and the restoration of perfect health would warrant the most favorable prognosis.

A CASE OF ANEURYSM OF THE AORTA PRINCIPALLY DIAGNOSED FROM THE NERVOUS SYMPTOMS,

By OSCAR J. COSKERY, Professor of Surgery in the College of Physicians and Surgeons, Baltimore.

(Read before the Medical Society of the State of North Carolina, Fayetteville, May 8, 1888.)

On September 30th, 1885, William D., a plasterer by occupation, was admitted into St. Joseph's Hospital, Baltimore. His history, given by himself, was as follows: Age 32, single, weighed 150 pounds, measured 5 feet 11 inches in height. Had never had any serious illness nor specific disease. Family history good. About ten days before admission, while standing upon a platform, sixty feet from the floor, and trying to put in position a plaster ornament on the ceiling of a church, he felt a sudden pain in the upper portion of his right chest, a sense of weakness that obliged him to sit down upon the scaffolding, and a desire to cough. He coughed twice, and each time expectorated a mouthful of blood. From that time to date of admission had felt "*badly*." He was unable to descend from the high scaffolding for nearly one hour, on account of weakness.

I saw him for the first time on October 1st, 1885, the day after admission. His general appearance was that of a man in good health, but he complained of an obscure pain in his right chest; there was slight cough, but no bloody expectoration, and the most prominent symptoms observed at this first examination were a peculiar brassy voice, a difficult enunciation of words and an absence of pulse in the right wrist. The patient was up and going about the ward.

On October 7th, 1885, at my morning visit, I found him sitting up in bed, coughing spasmodically with a distinctly croupy ring. At times the attacks would continue until he would get blue in the face, and I really feared suffocation, and discussed with myself the advisability of tracheotomy. These fits of coughing were ended with expectoration of some frothy mucus. Under regular doses of Hoffman's Anodyne the patient passed away in about seventy-two

hours. Only loose râles could be heard over the chest, mostly right-sided.

A month later he had an attack of the same kind, lasting nearly a week, when, on several occasions, I thought he would suffocate. In the meantime he had been helping about the wards of the hospital, only complaining of pain between the shoulders, and still the hoarse voice.

In December, 1885, he commenced to complain of pain in the throat—referred to the upper portion of the trachea—which I, on several occasions, noticed that he grasped with his hand and seemed to want to raise it from its deeper connections.

On January 10th, 1886, he spoke of pain over the right acromion process and running up to the occiput upon the same side. On a careful examination auscultation revealed a few râles over the upper half of each side of chest; but what principally attracted attention was a peculiar *thud*, heard in systole, below the second rib, right side, and at its inner fourth. From this, the peculiar history of the case recounted above, the nervous symptoms and absence of pulse in right radial, the diagnosis of aneurism of ascending aorta was made. Principally, though, I may state, upon the nerve symptoms, as loss of pulsation in the radial artery is common from anomalous distribution, and in this case the normal temperature of the extremity pointed to such a possible condition. Moreover, patient now began to complain of some pain in deglutition, and still of discomfort between the shoulder-blades.

From now to March 1st, 1887, the note-book says that, with the exception of occasional attacks of what could only be termed acute bronchitis, of the almost continuous pain in the regions above referred to, of the peculiar tone of voice, of the odd sound synchronous with the systole of the heart, but above and to the right of the base of the heart, there could be seen very little alteration in the patient's condition beyond the facts that his nights were becoming restless from pain, and that he was losing some flesh. Up to this date, also, eighteen months from his admission, he had been, with a few intervals, acting as assistant ward-master.

About the 5th of March, 1887, he began to complain of intense neuralgic pain, referred to the course of the internal cutaneous nerve of the right arm. This was soon followed by the same kind of pain upon the outer side of the arm, but greatest at the elbow.

The other nerve symptoms still continued. During April pain came on in the forearm, and by the 1st of May the whole upper extremity of the right side, down to the finger-tips, was slightly swollen, so painful as to cause the patient to cry out, absolutely preventing sleep except through the aid of large doses of morphia, and useless; the patient not being able even to lift it from the bed. The hoarseness also became much worse, and the patient's voice sank almost to a whisper.

On June 25th, 1887, or nearly twenty-one months after admission into hospital, a pulsating tumor was first noticed between the first and second ribs of the right chest, near the sternum. In a week pulsation was plainly perceived above and external to the right sterno-clavicular articulation. Soon after such rapid growth of the swelling came on, that I was inclined to consider my original diagnosis as not correct, and to think that I had a small round-celled sarcoma of the brachial plexus to deal with. The increase in size and of pain was observed day by day by the patient, myself and his ward attendants. After great suffering he died on July 29th, 1887, twenty-two months from admission.

At time of death there was an elongated elastic tumor extending from right clavicle to lobe of right ear, about three inches in transverse diameter, and which had caused patient for some days to hold his head to the right side.

Post-mortem revealed the following conditions: On the right side of the neck was an elongated fluctuating tumor, mostly superficial, but, above, partly covered by the *sterno-mastoid* muscle. On section this tumor was found to consist of fluid blood to the extent of nearly one pint, that this blood had torn up the loose cellular tissue of the neck and had partly dissected the superficial muscles from each other. Following this blood-sac downwards, it was found to communicate with a sacculated aneurysm of the ascending aorta, which, bursting into the cellular tissue of the neck allowed of the rapid formation of the cervical swelling, which made me think my diagnosis of long before might be incorrect. This sacculated aneurysm was a false one, capable of containing about two ounces of fluid and partly filled with decolorized blood-clots. Besides the above there was a small *true* aneurysm of the ascending aorta. There was also complete erosion of the first and second ribs.*

*Specimen shown.

There are several points in this case that may be discussed. The first is the feeling of something having given way in the chest, and the slight spitting of blood. This symptom I have seen in another case, somewhat similar, and acknowledge my inability to explain. The second is the absence of pulsation in the arteries of the right upper extremity so many months before any tumor could be detected. So long as the aneurysm remained small, surely sufficient blood should have gone into the right *subclavian* as to have given some impulse to the vessels beyond; but there certainly was none. One other case I have seen where absence of pulsation in the arteries of the right upper extremity was the only symptom, and where the patient died two weeks from date of examination of a sacculated aneurysm which burst into the gullet. The specimen is in my museum.

A third point of interest was the peculiar impulse felt by the ear at the base and to the right of the heart. This symptom corresponded closely to the "diastolic shock," as described by former writers, and which Dr. Douglas Powell found present in fourteen out of thirty-six cases,* except that it was plainly heard only at the time of ventricular contraction, and did not follow it. This may be explained upon the hypothesis that the aneurysm was still small, and the opening into it very free, allowing the blood to pass directly in, instead of regurgitating, as it is supposed to do in order to produce the "diastolic shock."

The exceedingly slow growth may be supposed to have been due to the probability of its having been originally a true aneurysm, as is to be seen in the other sac in the specimen shown—that the coats of the artery held well for sometime, but that eventually they gave way, and then the tumor grew more rapidly.

Of the treatment I can only say that everything in the shape of constitutional treatment that could be thought of was tried—potassic-iodide, in large and increased doses to the stage of iodism, perfect rest in bed, with and without the modifications of Valsalva's method, and depletion, without any perceptible impression. Operative interference was neither undertaken nor desired by the patient.

*Vide Reynold's System of Medicine, Vol. II., p. 848.

ELECTROLYSIS IN GYNÆCOLOGY.

By AUGUSTIN H. GOELET, M.D., New York.

While I shall endeavor to give a general outline of the use of electricity in gynæcology, it is not within the scope of this article to describe the technique of its application; but the cardinal principles involved will not be lost sight of, for without them it would lose much of its practical value. In view of the fact that so much has been written recently of this agent and of its power to remove conditions which, heretofore, we thought only amenable to laparotomy, leads us to the conclusion that ultimately it will supplant the knife in many instances where this has been thought the only remedy. The substitution of electricity for laparotomy demands the greatest consideration, especially when we are reminded that often, after submitting a woman to a dangerous operation, her suffering is in no way lessened, and we are obliged to resort to other means for relief, having accomplished nothing save irreparable sterility. Advocates of operative procedure may claim that this condition was present before. But might not that have been overcome if the condition which caused it was relieved by appropriate electrical treatment? Certainly there would be no chance after the removal of the tubes and ovaries. Its comparative immunity from danger recommends this agent very highly to our favor as a measure to be resorted to and given thorough trial in all conditions where the statistics of reliable authorities show it to be beneficial, before laparotomy is considered to be called for.

In administering electricity it is necessary to bear in mind the different action of the two poles. 1. The *positive* pole is *styptic* and *anti-hemorrhagic* where used within the uterus. 2. The *positive* pole has marked *anodyne* properties. 3. The *negative* pole is *caustic*, and care must be observed in using it. 4. The *negative* pole has marked *electrolytic* action (alterative and absorbing), and it is under the influence of negative galvanism that tumors are made to disappear and inflammatory deposits are removed. It is also necessary to bear in mind that the electrode for the use of the positive pole must be made of a metal which is not acted upon by this current, as platinum or aluminum. The reason for this is that acids collect at the positive pole and most metals are corroded by

them. The negative electrode may be made of copper or brass nickel plated. But in using the negative electrode in the vagina it should be covered with absorbent cotton (moistened) to lessen the caustic effect. It need not be covered with cotton when used in the uterine canal. The external electrode should be large, and I may say the size should be increased with the strength of the current. The smaller the electrode the greater will be the discomfort to the patient in the passage of the current. When currents of great intensity are used for the removal of tumors it is necessary to have the current evenly distributed over a large surface externally.

Much has been written of late in favor of electrolysis in uterine fibroids, a condition which has for a long time baffled our best directed efforts. Ergot has proved only slightly beneficial in a small minority of instances. And hysterectomy, the latest craze, is anything but a desideratum. Apart from the danger which is incurred, the result, if successful, leaves us little to be proud of, for by it, we must confess, we have been guilty of mutilation. By it we deprive woman of the only true emblem of her sex, and she is doomed to go through the remainder of her life wombless. Electrolysis, which is capable of so much good, without risk, leaves the patient with un mutilated procreative organs, and while in some instances she cannot be pronounced cured in the strictest sense, she has been so far relieved as to make life a pleasure instead of a burden, and the tumor has been so much reduced in size as to give no further inconvenience. They are, as Apostoli styles it, "symptomatically cured."

The weight of evidence seems to be in favor of Apostoli's method, which, in contradistinction to the other methods, means puncture with one pole only; that is, one pole (negative) of the battery is connected with the internal electrode, which penetrates the tumor through the vagina when it can be reached there, and the other pole (positive) connected with a large, moist, clay-cake electrode on the abdomen. When the tumor is not accessible through the vagina, the intra-uterine application of the positive current is used, and the current is much weaker and the applications are more numerous. But the weight of opinion is against the intensity of the current (250 to 500 milliamperes) as used by him. This enormous strength of current would appear to be a grave objection to this mode of treatment from the risk involved, and it is clearly evident that it

should not be attempted by any one who is not thoroughly conversant with every detail. Apostoli, while he claims now immunity from unpleasant sequelæ, confesses many serious consequences before he mastered the subject. He has been persistent, and his results are now truly brilliant.

In this country the same results have been claimed for a current of less intensity (less than 100 milliampères) but of longer duration, and consequently there is less risk. What matters it if we take longer to cure the patient and the applications require more time, if by doing so we reduce the danger to nothing.

But what is claimed for the treatment of uterine fibroids by the electrolytic methods? Dr. Apostoli says: "1. Hemorrhage is controlled. 2. The troubles of menstruation, dysmenorrhœa and nervous disturbances are relieved. 3. The direct pains in the growth and pains arising from mechanical pressure are removed. 4. The harrassing series of reflex pains, rectal and vesical, are destroyed. 5. The tumor is, in a majority of instances, made to disappear. 6. The treatment is simple, any one in possession of the required apparatus being able in a short time to administer it. 7. The mortality following this method is *nil*, providing the directions for operating be faithfully carried out. 8. Relief of symptoms in some cases must be accepted in lieu of cure."

Does not this, coming from such high authority (who, I may add, is honest enough to confess his errors) put a veto upon hysterectomy? The most successful laparotomists must acknowledge that they can promise no such relief by the dangerous operation of hysterectomy. *Conservatism is gaining ground and the fashion of laparotomy has seen its best days.*

But the superiority of electricity over laparotomy is not limited to uterine fibroids. It has been successfully used in diseases of the appendages where high authority pronounced their removal necessary. In all conditions, except where the presence of pus can be accurately diagnosticated, it may be considered applicable. And in chronic inflammatory conditions of the surrounding tissues relief may be confidently looked for by electricity appropriately administered. By it the circulation is regulated and absorption is favored. Here advantage is taken of the anodyne properties of the positive pole and the absorbing qualities of the negative.

I call to mind a case which will serve to illustrate the prompt

action of electricity in relieving a condition which a prominent gynecologist thought required laparotomy.

Case.—When first called to see Mrs. C., aged 28 years, mother of one child, she was suffering from the effect of a ruptured pyosalpinx of the right side, which, probably because of previous pelvic inflammation and adhesions, did not rupture into the peritoneal cavity, but discharged through the rectum. She had recovered sufficiently to be about her room, and the drainage had ceased, but she complained of intense pain, mostly in the left side of the pelvis, which was greatly aggravated at every menstrual period, compelling her to be in bed, and she feared another abscess. Examination revealed the pelvis filled with inflammatory deposit and its contents fixed. On the right side there was not much tenderness to touch beyond what would be expected from the condition of fixation and the recent trouble, but the left side was exquisitely sensitive and showed a condition of enlargement and inflammation of the ovary and tube. No collection of pus could be detected, but she was clearly in a ripe condition. I asked the advice of one of the surgeons of the Woman's Hospital, who, after seeing her, advised the removal of the tubes and ovaries as soon as she could be prepared for the operation. I determined to do all in my power to avert an operation which I felt sure would most likely prove fatal in her condition. After a few week's treatment with cocaine, used as I advised for pelvic pain in an article in the *Boston Annals of Gynecology* for April, 1888, entitled "Routine Work in Gynecology and the Relief of Pelvic Pain," she was so far relieved as to be able to get out and come to my office. A systematic course of treatment (twice a week for two months) with cocaine and galvanism, relieved her so that she suffered no pain in walking or riding, as she had done before, and the dysmenorrhœa was comparatively insignificant. The uterus was at that time still fixed, but was not sensitive to moderated pressure, and the left ovarian region was only sensitive to sudden pressure. About this time, contrary to my advice, believing she was well, or nearly so, she removed to another city. I did not see her again for ten months, when she returned to let me know she was well, having had no trouble nor suffering any inconvenience since. Examination showed her condition much improved. The uterus was somewhat movable, though not freely so, and the vaginal roof was not sensitive to ordinary pressure, though

deep pressure in the left ovarian region produced some pain and the ovary was some larger than normal. I advised further treatment to complete the cure, but she thought it unnecessary and would not consent. She has been restored to a life of usefulness by the only safe method of treatment known to me.

It seems pertinent here to explain the method of using cocaine for the relief of pelvic pain described in the article referred to above. The vagina when perfectly clean and free from secretion, becomes a good absorbing surface. This is accomplished by means of a spray of antiseptic solution (not bichloride, which decomposes cocaine) connected with a compressed air apparatus. The vagina is dried with absorbent cotton, then sprayed with the cocaine solution 2 per cent. or 4 per cent., and a non-absorbent cotton tampon, with string attached, is introduced and arranged in such a manner as to prevent the escape of the solution when the patient is on her feet.

This combination of cocaine and galvanism is a method of treatment applicable to a great many conditions of disease of the pelvic organs; conditions either of inflammation or its results in a chronic state, such as endometritis, metritis, perimetritis and cellulitis, and salpingitis and ovaritis. No definite rule can be laid down, however, for either the strength of the current to be used or the position of the poles in every case, for the susceptibilities of patients vary, as well as the indications of different conditions, and much depends upon the judgment and experience of the operator.

The cardinal principles enumerated above must be borne in mind, and must be a guide to the treatment necessary. The milliampère-meter to measure the dose is important, for without it the work is necessarily uncertain. The current from ten cells of a freshly filled battery may represent double the number of milliampères which the same number of cells would give after two or three weeks steady use. The intensity of a given number of cells diminishes with constant use. An important point is not to use the battery too long without refilling, or its power is uncertain. If used half an hour a day, it should be refilled at least every month.

In the treatment of uterine catarrh electricity is both safer and more satisfactory than any method yet advised, and authors who have written recently advising the use of caustic applications, will gladly recall their words. In this condition the negative current, with a suitable electrode, is used until the os is patulous, then the

positive current is used for its styptic effect. The current strength necessary will vary from four to eight cells of a freshly filled battery of small elements.

I have had made an electrode with insulated handle and three different size points which screw in. The points are two and a half inches long, conical at the distal extremity, and there are three sizes of the French scale 13, 15 and 17. They are made of copper nickel plated, and may be curved to suit the canal. For the positive current I use an aluminum tip a little larger than an ordinary uterine sound. The external electrode is applied either to the back or abdomen.

When it is desired to overcome a flexion or to act only on one part of the canal at a time, an electrode such as is used for stricture of the urethra may be used with the negative current. This is an olive pointed bougie insulated to the tip. The duration of the application may vary from five to ten minutes. No force is to be used in passing the electrode and to avoid giving a shock the connection with the battery must be made before the current is turned on and the strength increased one cell at a time until the electrode passes the obstruction. With the point of the electrode pressing gently, this will take from two to five minutes. The positive electrode must be introduced before the current is turned on.

If the os is not patulous, or if the condition is such as demands an alterative action, the negative current is used until this is accomplished, and afterwards the positive, for its styptic effect. Granulations are quickly removed by the negative current, and by increasing the strength of the current a safe caustic effect may be obtained when desired. Flexions which resist ordinary means of relief are very satisfactorily cured by the alterative effect of the negative current at the point of flexion. Apostoli is very nearly right when he says that, apart from malignant disease, he knows of hardly any disease or displacement of the uterus which cannot be either relieved or cured by electricity.

It seems hardly necessary for me to emphasize the necessity of thorough antiseptis in connection with this treatment. In treating tumors by puncture through the vagina a solution of bichloride (1 to 2,000) should be used previously. When cocaine is used I prefer as an antiseptic a saturated solution of hydronaphthol in water used with a spray. This is said to be equal in antiseptic power to a solution

of bichloride 1 to 3,000. It does not decompose the cocaine and has a very agreeable odor.

I have used the term electrolysis in my caption, though not strictly appropriate for this paper, because, had I used the word electricity, it would have included the use of the faradic current which would have lengthened the paper undesirably. Electrolysis refers to the action of the negative pole alone, and I have spoken of both poles under this head, but I trust I have made myself clear to my readers. The negative current is the one most frequently used, however.

It is my intention to take up the subject of the faradic current separately on some future occasion.

243 W. 54th Street.

BOARD OF EXAMINERS OF NORTH CAROLINA.

In 1886 there were 63 applicants for license before this Board; 17 were rejected—26.99 per cent.. In 1887 there were 48 applicants; 14 were rejected—29.17 per cent. Of the 34 that passed the examinations 32 were regular graduates. Of the 14 that did not pass 8, or 59.14 per cent., were graduates. In 1888 there were 53 applicants; 17, or 32.07 per cent., failed to pass. Of the 36 that passed 35 were graduates. Of the 17 rejected 12, or 70.58 per cent., were graduates. In 1887 and 1888 there were thus 101 applicants, 87 graduates and 14 non-graduates; 22.98 per cent. of the graduates failed to pass, while 78.57 per cent. of the non-graduates failed. At the meeting of this Board in May, 1888, it was decided that in future examinations of applicants shall be in writing, and the standard 70 per cent. Of the 36 applicants licensed at the May meeting of the Board, 2 were colored.—*The Journal of the American Medical Association.*

THE FACULTY of the University of Pennsylvania have banished cigarettes from the college grounds on the recommendation of Prof. J. William White, who has charge of the physical education of the students.—*The Cincinnati Lancet-Clinic.*

SELECTED PAPERS.

PHYSIOLOGY OF THE THIRD STAGE OF LABOR.

The spirited discussion on the management of the third stage of labor that has recently arisen between Credé and Ahlfeld suggests the fitness of a brief review of certain items of moment in the physiology and conduct of the period of the after-birth.

"If," writes Dr. Berry Hart, "the delivery of the placenta depended on obstetricians knowing how it separated, no woman in labor would complete her third stage." This remarkable assertion strikes the casual reader as a sacrifice of fact for the sake of a pseudo-epigram, seeing that the late exact researches into this subject, of the Germans in particular, go far towards supporting views current nearly a generation since. But the animus of the remark soon becomes apparent—the writer has an hypothesis of his own to propose. Before looking into Dr. Hart's supposition let us consider the principal theories that heretofore have been regarded as more or less fully explanatory of the phenomena.

In 1865, Schultze, of Jena, illustrated in his familiar "*Wandtafeln*" (Tafel, xvi.) Baudelocque's theory on the mode of separation and extrusion of the placenta from the uterus. He showed that during labor the lower two-thirds or more of the membrane are loosened, and the after-birth detached in part from the uterine parietes by the contractions that effect the expulsion of the child. After the completion of the second stage a surface reduction of the placental segment of the uterine wall occurs as the result of retraction and contraction that the after-birth cannot follow. Its centre yields, and is thrown up into a fold protruding into the cavity of the ovum, while a retroplacental hæmatoma is formed, that further aids in the separation, commonly from the centre towards the more firmly adherent periphery. Little by little the placenta sinks downward in the direction of least resistance, with its foetal surface in advance, pulls the membrane from the uterine walls by its own weight, and finally emerges into the vagina in a shape that has been compared to an inverted umbrella. This mode of detachment and expulsion was looked upon for a long while as the typical physiological process.

J. Matthews Duncan, in 1871, described another mechanism, that was later accepted as the typically normal *modus* by Spiegelberg, Crédé, Fehling and others. The separation, according to Duncan, begins at the periphery, and proceeds towards the centre, while the retroplacental hæmatoma is of inconstant occurrence, and seldom plays an important rôle. The after-birth is never inverted when the process of spontaneous separation is not disturbed, and the organ passes edge-wise through the cervical canal.

To speak accurately, Baudelocque's account of placental separation includes both of the mechanisms described by Schultze and Duncan. Thus he writes: "Sometimes the disunion commences at the centre of the placenta, and sometimes at a point in its circumference, and so different phenomena are produced. In the first case the middle of the placenta, being pushed forward, forms a pouch that fills with blood, and that presents to the touch its surface, covered with membranes and vessels. A closely similar pouch forms, and the placenta presents in the same manner, when the separation begins at the point in its border that is farthest removed from the uterine orifice. But things take place differently when the placenta is detached from below, especially when near the orifice. In the latter case it rolls upon itself in the form of a cylinder or of a rolled wafer, and suitably to the length of the uterus, in such a manner that it presents its rough surface to the touch or the sight, and its exit is always preceded by the discharge of a greater or less quantity of blood.

Recent observations confirm Baudelocque's views. Thus, Pinard, out of sixty cases, noted presentation of the fetal surface fifty-one times; of the edge, seventeen times; of the maternal surface, twice. Ribemont-Dessaignes, out of seventeen cases, observed Schultze's mode twelve times, Duncan's mode four times, and presentation of the maternal surface twice. Ahlfeld describes the separation of the placenta that he actually saw in a case of Porro's operation, in accord with Schultze's theory, although he admits the occurrence of Duncan's mechanism in about 20 per cent. of all cases. According to the observations of Richard Werth, elevation follows the reduction of the surface area of the placental segment of the uterine wall, not in the form of a simple fold, constituted by the entire placenta, but in several longitudinal rolls, while the organ as a whole is arched over its fetal surface from the sides—a mechanism that corresponds in part to the accounts of both Schultze and Duncan. But the most valuable

contribution to the literature of the subject within the last few years is found in Schroeder's "Schwangere and Kriessende Uterus." Schroeder's method—the same as that used by Cohn and Werth—consists in the introduction of the hand within the uterine cavity immediately after the expulsion of the child, and the direct palpation of the placenta and membranes. Of course, this method is liable to unavoidable sources of error. The hand may detach the placenta, or it may interfere with the normal separation, or, finally, it may disturb uterine cavity. It yields results, however, that, after correction by the study of plane, frozen sections of the parturient uterus, and the observation of placental separation *in viva*, as in Cæsarean section, may be accepted as conclusive. In the cases observed by Schroeder the after-birth was detached, as a rule, after Schultze's mode, in exceptional after the manner of Duncan, and then only in the event of lateral insertion near the internal os. "The hand lying in the *cavum uteri* feels one or several large folds of the placenta projecting into the interior of the egg, until the apparently detached centre of the placenta sinks downward towards the internal os, and the placenta, inverting and tearing loose the membranes, descends below the contraction-ring. In the typical cases, in which the placenta is situated nearer to the fundus, this inversion of the membranes is so complete that scarcely a drop of blood escapes until the placenta, with its foetal surface in advance, appears at the vulva. The sac formed by the membranes and the uterine surface of the placenta is then found distended with blood."

Schroeder also answers satisfactorily the question of obviously great practical moment, Why is the placenta so seldom detached before the birth of the child, and why does its detachment follow so precisely and almost invariably the birth of the infant? The surface reduction of the placental segment of the uterine wall, as the result of retraction and contraction, *per se*, does not constitute an adequate explanation, since the hollow muscle of the uterus is not seldom in almost as high a degree of tonus and clonus during the second as during the third stage of labor. The placenta, although possessing no truly contractile element, may still accommodate itself to the diminished area of its site in such a degree as to maintain partial attachment. This fact has been abundantly demonstrated by Schroeder's plane, frozen section, and has been repeatedly pointed out by Barbour and others.

During the second stage of labor, with every contraction, the intrauterine pressure is increased in a degree exactly proportionate to the force of the contraction, so that the placenta is pressed against its site of insertion. After the expulsion of the child the intrauterine pressure sinks to a point equal to, or even less, than that of the atmosphere, and the force developed by retraction and contraction assumes a purely centrifugal direction, when the after-birth is readily cast off. Examples of separation of the placenta after sudden diminution of intrauterine pressure are not of infrequent occurrence. Thus, after the birth of the first twin, and the escape of a large quantity of liquor amnii, after the introduction of the hand in turning, and in many cases of premature detachment of the placenta, the operation of this factor in the separation of the after-birth is often evident. In two cases of Cæsarean section that have come under the writer's observation, the incision through the uterus and rupture of the membranes were followed instantaneously by the presentation of the placenta through the cut. In these cases the operation was performed before the occurrence of labor-pains, and the placenta separated long before the uterus was firmly contracted, so that the sudden diminution in intrauterine pressure was probably the essential cause.

So far no mention has been made of the antecedent changes in the *decidua serotina*, consisting in the formation of fissures and interstices in the deeper layers, as well as the pushing together and folding of the *decidua placentalis*, that Ruge has shown play such an important part in the process of separation under normal conditions.

From this brief sketch it will be inferred that the facts in our possession with reference to the normal process of placental separation are neither so few nor so insignificant as to justify the remark of Dr. Hart that heads this note. Moreover, there is no apparent reason for the introduction of an hypothesis so long as the theories now held are so adequately explanatory of the phenomena. Dr. Hart's supposition is that "the placenta separates, not from diminution of the placental site, but during the expansion in area of this site after retraction."

It seems scarcely necessary to point out for the second time that placental separation is dependent in a much higher degree upon diminution of intrauterine pressure than upon any change in the

uterine musculature, whether of retraction or contraction. If it be admitted that the placental site increases in area after retraction, the assumption is most extraordinary, even gratuitous, that the placenta is now unable to follow this expansion, when, a few seconds before, it could accommodate itself with ease to the diminution of area caused by the rhythmical contraction of the uterus. Failing the demonstration of its *raison d'être*, Dr. Hart's hypothesis requires no further consideration.

The interval between the birth of the child and the extrusion of the placenta by the hollow muscle of the uterus below the plane of the contraction-ring has been estimated by Schroeder at fifteen to twenty minutes for the majority of cases. Out of three hundred cases, in only twenty did this process require longer than one-half an hour, while in multiparæ the after-birth was often observed to pass the contraction-ring within one minute after the expulsion of the child. Ahlfeld fixes the average period at thirty minutes, while under certain conditions the membranes may remain above the contraction-ring as long as one and one-half to two hours.

The after-birth now lies in the lower uterine segment, the cervix and the vagina, where it remains, if not expressed or withdrawn, for an indefinite period, until it is expelled by the force of gravity—as when the woman assumes the sitting or erect posture—or by the contractions of the abdominal muscles and the descent of the diaphragm, aided by the elasticity of the vagina. In this position the rhythmical contractions of the uterus are unable to effect its further extrusion.

There are two appearances in particular that indicate the descent of the placenta. Ahlfeld emphasizes the value of very gentle traction on the cord. But, as pointed out by Stratz, this symptom is only of decisive value when the original position of the placenta has been determined by the introduction of the hand within the vagina.

Schroeder describes as the safest clinical symptom the ascent of the fundus uteri and its diminution in volume, as well as the appearance of the characteristic fold, corresponding to the contraction-ring, between the fundus above and the distended lower uterine segment below. To perceive this sign, however, perfect familiarity with the contour of the uterus, considerable experience in abdominal palpation, and favorable conditions with respect to the relaxed state of the abdominal parietes are necessary.—*Therapeutic Gazette*.

ON THE TREATMENT OF ANEURYSM.

Dr. R. N. Taylor reports three cases of aneurysm treated with iodide of potash. One a sacculated aneurysm of the left subclavin artery situated on its first and middle portions. The patient was put upon iodide of potash, 15 grains three times a day, the dose after a week being increased to 20 grains. This treatment was continued for some months, during which time there was a steady improvement and final disappearance of the symptoms, and the tumor became reduced in size, a previous thrill and pulsation disappeared, and a bruit which had at first been heard was no longer audible. For six months following the iodide was continued in reduced doses. Fifty-two months from the beginning of the treatment there were no signs of a return. The other two cases were of aneurysmal dilatation of the artery, one being of the right common carotid involving the artery in its whole extent, and the other involving the upper part and the bifurcation of the same; in both iodide of potash, 15 grains three times in the day, was prescribed, resulting in relief of the symptoms, principally pain at the seat of the lesion. Treatment was continued in one case three months, in the other six months, to be resumed on return of the symptoms. There was no diminution in the size of the arteries.

Dr. R. L. Macdonnell gives six cases treated with iodide of potash, one a large aneurysm involving the arch and descending aorta and producing well-marked symptoms. The patient was put upon 10-grain doses, ordinary diet, and rest in bed. The treatment was continued for six months, when improvement was so marked that the patient returned home. Treatment was kept up, and two years after its commencement improvement still continued. Case 2 was under treatment six months, taking 10-grain doses of iodide of potash, and resulting in so much improvement that the patient returned to his home and passed from further observation. Case 3 was a well-marked thoracic aneurysm treated by 10-grain doses of iodide of potash three times a day. Treatment was continued four months, when the patient left the hospital and obtained work as a night-watchman, afterwards as a groom; he returned a year afterwards, having continued treatment almost uninterruptedly, free from his previous symptoms, and a year after this reported himself as well and able to do hard work. Case 4 was treated with iodide

and rest, and steady improvement followed, and he was still alive at the end of a year. Case 5 was one in which improvement followed from the use of 10-grain doses, rest and good diet, but was not long enough under observation to test the treatment. Case 6 was believed to be an innominate aneurysm. Iodide of potash, 10 grains three times a day and rest was the treatment. He was under treatment nine months when he was able to leave the hospital and gain his living as night-watchman for seven months, medication during this time being continued. When Case 7 came under observation there was orthopnoea and severe pain in chest. There was a large innominate aneurysm; 10 grain doses of iodide of potash three times a day and rest was the treatment. At the end of a fortnight all urgent symptoms had disappeared and the patient was enabled to return to his duties—those of a military clerk—suffering no pain. Further history of the case is wanting.

Dr. Israel T. Dana reports a case of aneurysm of the abdominal aorta treated with rest, moderate diet and 20-grain doses of iodide of potash three times a day. Improvement soon began and was steady for nine months, two of which were spent in bed; he had gained twenty-four pounds in weight and was able to do light work.

Dr. C. W. Suckling (*British Medical Journal*, April 30, 1887) reports twenty cases of aneurysm, and speaking of treatment says:

“Tufnell’s plan of treatment, together with the administration of iodide of potassium, gave relief in twelve cases. In two cases under this treatment the dulness almost disappeared, the pressure symptoms completely so, and the diagnosis of the condition could not have been made without a knowledge of the previous condition. The iodide was given in large, commencing with 10 grains and increasing to a dose of a drachm or more, according to the tolerance and effects. In two or three cases the iodide seemed to do harm, the pulse becoming very quick. Aconite in these cases suited better.”

Dr. M. H. Fussel reports a case of thoracic aneurysm treated with potassium iodide, 15 grains three times a day, the patient, a carpenter, continuing at work. At the end of a week the principal symptom pain was relieved; at the end of two months patient reported that he was well. He reported again a little over a year afterwards, and stated that he had been well until six months previously, when, after a hard day’s work, his symptoms became exag-

gerated, and at the time he was seen there was marked dyspnœa, and he had been unable to work for two months. Iodide in 20-grain doses with moderate rest resulted in marked relief of the symptoms. Dr. Fussell says: "The action of the iodide in relieving pain leaves nothing to be desired in that direction."

Dr. George W. Balfour, on the failure and success of the iodide treatment and criticising Dr. Suckling's results (*vide supra*), writes:

"Had Dr. Suckling been fully cognizant of all the facts bearing on the treatment of aneurysm by iodide of potassium, he would have known that this quickening of the pulse is due to an overdose, and is one of the things to be guarded against. With your permission I shall restate these facts concisely for the instruction of those whose treatment fails through ignorance, and the information of those others who, even in the present day, continue to practice the unscientific and hazardous plan of filling the sac with iron wire, apparently unaware that we now have a perfectly reliable method of treating aneurysms, the success of which is entirely commensurate with the earliness of our diagnosis and our acquaintance with the principles on which the treatment is based.

As recumbency reduces the heart's pulsations from six to more beats per minute, it is always advantageous and often necessary to begin the treatment of aneurysm by putting the patient to bed. The patient's pulse must then be counted daily at the same time for several days, so as to ascertain his normal pulse-rate when recumbent. Next we prescribe the iodide, in 10-grain doses every eight hours. The pulse-rate is noted for several days subsequently; if it remains unaffected, the dose of the iodide is increased to 15 grains every eight hours; and should the pulse-rate still remain unaltered, the dose may be still further increased. It is unusual, however, for more than 15 grains to be given with advantage, and it is more usual to find it impossible to give more than 10 grains every eight hours without raising the pulse-rate. The proper dose, once ascertained, must be steadily continued till the desired effect is secured. Marked improvement is generally observed in three months; sometimes in less. If the case is got early enough, the cure is practically complete; but even when treatment is delayed till the aneurysm has attained a large size, the relief is usually remarkable, and it is obtained without risk.

"The action of the iodide is to dilate the arterioles, and thus

lower the blood-pressure over the whole body, the force of the heart being at the same time slightly diminished. The result of this lowering of the blood-tension is that the aneurysm is no longer actively dilated with each pulsation, and the walls of the sac behave like a hollow muscle opposed to an obstacle with which it can successfully cope, and become slowly hypertrophied, the sac itself at the same time gradually diminishing in size. That the walls of the sac may hypertrophy, it is of importance that the blood-tension should not be too much lowered; and for this reason the pulse-rate requires to be closely watched at the commencement of the treatment, as a rise in the pulse-rate is the only available indication of an injurious lowering of the blood-tension. As the iodides not only lower the blood-pressure, but also remove the albuminates from the blood there is no need to starve the patient. If we do so, we unduly lower the blood-pressure, impoverish the blood, and render a curative hypertrophy of the walls of the sac more or less impossible. The superadding of 'Tufnell's plan' to the treatment of iodide of potassium is, therefore, no improvement, but the reverse; and though just at first we must be a little careful in dieting our patient, because recumbency and repletion are liable to induce gastric attacks, yet it is needful to feed the patient well during the iodide treatment; otherwise good results are not so surely obtained. It is always necessary for an aneurysmal patient to be a total abstainer from all alcoholic drinks, both during treatment and ever after."

Dr. O. T. Schultz reports a case of aneurysm of the first part of the aorta treated with 5-grain doses of iodide of potash four times a day. Improvement was so marked that the patient considered himself well, and was able to do heavy laboring work, and had stopped medication. At the end of five months the aneurysm ruptured, and autopsy showed considerable reparative work in the tumor.

Dr. W. H. Morrison (*Polyclinic*, August, 1887) reports a case of aneurysm involving the innominate and right common carotid, operated on by Dr. Ashhurst. The right common carotid, just above the omohyoid muscle, and the subclavian in its third part, just outside the anterior scalenus muscle, were ligated with catgut. No cerebral symptoms followed the ligation of the carotid. Three months and a half after the operation the tumor was quite hard. No pulsation was detected, and the patient complained of no symptoms whatever.

Dr. Herman Mynter reports a similar case, an aneurysm of the innominate artery, which was cured by simultaneous ligation of the

common carotid in the middle, and the subclavian in its third division, outside the scalenus anticus muscle. Heavy catgut was used for ligatures, and strict antisepsis preserved. The wounds were sutured with catgut, and healed by first intention. Three weeks after the patient was discharged cured.

Dr. George H. Lyman reports a case of innominate aneurysm treated with iodide of potash, 10 grains three times a day, the dose being increased slowly from 15 to 40 grains, for a period of fourteen months; rest, limited diet and pressure were also used. There was steady improvement during this time, and it being thought that medical means had done as much as possible, the common carotid was ligated under the omohyoid muscle. Improvement was only temporary, and sixty days after the subclavian artery was ligated. The patient left the hospital six months after, and continued well for two months, when symptoms again appeared, and he died five months after leaving the hospital.

Mr. William Anderson reports a case of popliteal aneurysm successfully treated by compression for an hour, after which two needles were passed into the tumor, and a current from sixteen cells of a battery passed through them for five minutes; the needles were packed in antiseptic wool, and the pressure maintained for twenty-four hours, when it was discontinued and the needles withdrawn. The patient had an inguinal aneurysm on the other leg, which was treated by ligation of the external iliac artery about an inch and a half above Poupart's ligament; pulsation in the sac returned on getting up. The patient pursued his work, that of a train-conductor, for eighteen months, when he died of an aortic aneurysm; the autopsy showed the inguinal aneurysmal sac filled with a coagulum partly soft, reddish and friable, and partly pale, firm and laminated, and that the sac contained a small cavity into which the superficial femoral, profunda, internal circumflex, and a large muscular branch opened. The popliteal sac presented nothing special.

Dr. T. G. Richardson, at a meeting of the American Surgical Association in 1887, reported a case of popliteal aneurysm cured by position. The tumor, an aneurysm of the femoral artery, was about the size of a goose-egg, irregularly flattened, and appeared to be inflamed by manipulation. To overcome this Dr. Richardson suspended the limb flexed at right angles at the hip and knee. He found on the first day an improvement in the condition of the tumor, and a

few days later, that coagulation had occurred. A few weeks later he was discharged cured, and a few months after only a small nodule could be felt at the site of the tumor.

As this is probably the first case of femoral aneurysm cured by this method, he desired to call attention to the fact that no pressure was exerted on the tumor, but that the only treatment was flexion, and suspension of the limb, especially the latter. He thought that gravity had a great deal to do with effecting the cure.

Dr. W. W. Keen reports two cases of aneurysm in girls eighteen and eight years of age. The first case was an arterio-venous aneurysm of the ulnar, which had been ineffectually treated by Esmarch's bandage, tourniquet and digital compression successively; ligation of the artery and a mass of veins at the sight of the aneurysm resulted in complete cure. The second case was a spontaneous aneurysm of the interosseous artery of the hand, which, in the course of seven or eight years, disappeared spontaneously.

Mr. Percival reports a case of innominate aneurysm, treated by 20-grain doses of iodide of potash three times a day, and rest for two months, at the end of which time, no improvement having taken place, the subclavian and common carotid arteries were simultaneously ligated, the operation resulting in an arrest of the disease. Four months after the operation the patient resumed active duties, and three months after this she wished to return to hard work.

Dr. Knox reports a cure of a ruptured popliteal aneurysm by first ligating the femoral artery above the upper margin of Hunter's canal, and then cutting down upon the sac, turning out the clots and ligating above and below the sac.

Drs. Knox and Beatson, in the same journal, report the cure of a double popliteal aneurysm: one by intermittent pressure, extending over seven days, and amounting in all to twenty-five hours; the other by ligation in Scarpa's triangle.

Dr. F. W. Murray reports a case of aneurysm of the internal pudic artery, successfully cured by cutting down upon the sac, which had ruptured, and ligating the artery. The patient died five months afterwards, when the autopsy confirmed the diagnosis and cure of the aneurysm.

Dr. R. S. Smith reports a case of aortic aneurysm, treated first with iodide of potassium, in combination with rest and a limited diet, which appeared to arrest the course of the disease. The

symptoms abated and the patient considered herself well enough to leave the hospital ward and go to her own home after nine months' treatment.

On being readmitted three months after, the symptoms were again relieved, and she was discharged, fairly well, in a little over three months.

Nine months later galvanic treatment was commenced, first with one needle introduced into the sac; then, a week later, with two needles, insulated except at the ends; five weeks later, two needles; and after another interval of four weeks, two needles for the third time. It was thought that more active treatment would do more than alleviate symptoms; accordingly four needles were introduced to a depth of three inches. A current from thirty cells was maintained for half an hour. A month after there had been very marked and steady improvement, and three months after she was discharged, and continued fairly well for nine months, when she died of an attack of general bronchitis. Autopsy showed a layer of old firm fibrin an inch and a half thick, occupying the anterior portion of the sac, and adherent to the wall.

In No. 2 of the *Riv. Internaz. di Med. e Chirur.*, 1884, Professor Brancaccio published a case of aneurysm of the ascending aorta cured by electrolysis. The patient was in the hospital for a month, and after four applications was discharged able to return to work. Three years after, in 1886, he was again admitted with double pneumonia, which proved fatal after five days. Post-mortem showed the presence of a clot in the sac which rendered it impossible to push the finger into the aneurysmal cavity. In the same journal are notes of a case treated by galvano-puncture resulting in diminution in the size, and abatement of symptoms followed in a month by a gradual return of the tumor.

Dr. N. H. White and Mr. A. P. Gould report a case of sacculated aorta aneurysm treated by the introduction of thirty-two feet of steel wire into the sac. Death resulted at the end of eight days. At the necropsy the first part of the arch of the aorta was found dilated to the size of a large orange, and springing from the upper part of this dilatation was a sacculated aneurysm the size of a cocoa-nut. The intra-thoracic portion of the tumor had a distinct but thin sac, but that part which protruded from the chest was destitute of a definable sac, and was limited by infiltrated muscle.

The wire, together with loose fibrinous clot, formed a very dense mass, nearly filling, but not adherent to, the sac. The authors suggested that the fatal result was largely due to the absence of a distinct sac to the outer part of the aneurysm and to the effects of the formation of a very hard solid mass in the aneurysm, combined with rather firm external pressure applied for the rest of the serous oozing. They submitted the following conclusions, namely, that (1) Moore's treatment was worthy of further careful trial in properly chosen cases; (2) the operation should be performed before there was reason to suspect rupture of the sac; (3) only a small quantity of wire should be introduced at any one time; (4) no firm pressure should be made over the aneurysm afterwards.

Mr. J. W. Hulke mentioned a similar case that had been under the treatment of Dr. Cowley and himself. The aneurysm involved the right subclavian; thirty-three feet of steel wire were passed into the sac; the patient died at the end of three weeks; autopsy showed a slight clot about the wire.

At a meeting of the Surgical Society of Paris, M. Bucquoy related a case of femoral aneurysm treated by the introduction of a watch-spring into the sac. The spring went in without difficulty, but, instead of curling up, it went through the opposite wall; being slightly withdrawn, a portion was cut off, leaving about an inch and a half in the sac. During the following days the pain diminished, and the tumor became much firmer. Two months afterward the patient, having fallen into a cachectic state, died. When the tumor was opened the spring was found broken and covered with fibrin, but the clots were of recent formation. However, M. Bucquoy thought that, on the whole, the patient was benefited by the treatment, and that it might be repeated in a similar case.

Dr. John F. Morse reports a case of cure of an abdominal aneurysm by Loretta's method. Laparotomy was performed, and an exploring needle, one millimetre in calibre was thrust into the sac, when a stream of arterial blood spurted through it. One yard and a half of one-half millimetre silver-plated copper wire was carefully passed through the needle into the aneurysm, and the needle withdrawn. The slight hemorrhage resulting was readily stopped by touching the small opening with pure carbolic acid, rendered fluid by the addition of a little glycerine. After the usual toilet of the abdomen, the abdominal wound was united by means

of five deep and four superficial stitches. An antiseptic dressing of carbolized gauze was applied.

Eleven weeks after the patient was discharged cured; the tumor reduced one-half its size at the time of operation; consists of a hard nodule; no bruit.

In the *Lancet*, April 16, 1887, is the report of a case of abdominal aneurysm treated by Dr. J. J. Pringle by laparotomy and the introduction of steel wire into the sac. Only about a foot of wire was introduced before an insurmountable kink stopped its further progress. The patient died seven days later of asthenia. The aneurysm was found to arise from the aorta at the level of the coeliac axis, and to be saccular, and filled with clot, more than one-third of which was luminated, and presumably due to the procedure adopted.

Dr. W. E. Stevenson recommends the passage of a wire into the sac, and connecting the end of it with the positive pole of a strong galvanic battery, the negative pole being on an indifferent point, the circuit closed, and a current of from 15 to 20 milliampères passed for thirty minutes.—WALTER VOUGHT, M.D., in *Medical Analectic*.

SOKOLOFF ON THE ACTION OF THE ROOT OF APOCYNUM CANNABINUM ON THE HEART AND VASCULAR SYSTEM GENERALLY, IN WARM-BLOODED ANIMALS.

The North American plant *Apocynum Cannabinum* belongs to the natural family *Apocynææ*, which has already supplied us with a series of cardiac poisons and powerful remedies (*Strophanthus hispidus*, *Tanghinia venenifera*, *Vinca major*, *Thevetia neriifolia*, *Nerium oleander*, etc.). While the opocynum root is official in the United States of America, it remains still very little known in the Old World. In view of this circumstance, Dr. Sokoloff has undertaken an experimental enquiry into the biological action of the drug in Professor S. P. Botkin's clinical laboratory in St. Petersburg. The experiments consisted in the intravenous injection of an aqueous infusion of the root (eight grammes to 100 cubic centimetres of water) into various warm-blooded animals, the single dose of the

infusion varying from three to ten cubic centimetres. The chief outcome of Sokoloff's researches may be condensed thus :

(1) The drug produces a very pronounced retardation of the cardiac action, with a very considerable enlargement of the pulse wave and a marked rise of the blood tension.

(2) The initial retardation of the heart is followed by an acceleration of the cardiac action, while the arterial pressure ascends still further.

(3) The cardiac retardation (first stage) is caused by an irritating action of the drug, both on the central and peripheral inhibitory apparatuses.

(4) The subsequent acceleration (second stage) is not dependent upon anything like paralysis of the inhibitory apparatuses, since the injection of another dose of the infusion can again give rise to a retardation of the heart's work.

(5) On the injection of a very large dose, the two stages are followed by a third one, which is characterized by cardiac arrhythmia, the appearance of Traube's waves, and a gradual fall of the blood pressure down to 0.

(6) The rise of the blood tension during the first and second stages is dependent not only upon the stimulation of the vaso-motor centres in the medulla oblongata, but also (and that in a very considerable degree) upon the excitation of the spinal vaso-motor centres. Moreover, the heart and blood vessels themselves take a certain active part in the causation of the rise.

(7) Both the central and peripheral vaso-dilatory apparatuses remain wholly intact.—*Ejenedelnaia Klinitcheskaia Gazeta*, 1888.—
VALERIUS IDELSON, in *Medical Chronicle*.

WHALLEY ON ANIMAL TUBERCULOSIS IN RELATION TO CONSUMPTION IN MAN.

Mr. Whalley reviews the history of the subject, and claims for veterinary surgeons a large share in clearing it up. He mentions the animals in which it is most commonly found, amongst which are the ox, the pig, poultry and rabbits, although, especially amongst poultry, the lesions by no means follow a common type.

As regards the question of congenital or transmitted tuberculosis, the author has seen cases in which the disease has shown itself so early that it must have had an intra-uterine origin, and he cites cases in proof, which have come under the observation of McGillivray, of Banff and Mr. Frank Ashley.

It has been supposed, the author says, that in animals there is no sputum. This is an entire mistake, the sputum being ejected by the nose or swallowed. A very detailed account is given of the organs and tissues which the author has seen affected.

"The systemic effects exerted by tuberculosis," says Mr. Whalley, "depend on the extent of the lesions, the degree of infectivity, the nature of the organs involved, the strength of the affected animal, and the tendency, or the contrary, to rapid softening. If the serous membranes only are involved, with a limited number of the lymphatic glands, and calcareous changes predominate, the beast may appear to be in a perfect state of health—may, in fact, present to the eye a picture of blooming health—while, on post-mortem examination, many pounds' weight of tubercular new formations may be found in the abdomen or thorax, or both; yet the carcass may be laden with fat, and the muscular tissue be perfect in its physical aspect. On other occasions, and more particularly in young animals, the body becomes emaciated. The acute symptoms may subside, and the animal is apparently restored to health, and may become extremely fat. Subsequent investigation shows that the tuberculous processes have been arrested or become obsolete."

The paper closes with some remarks on the economic and sanitary aspects of the disease. Economically the loss is enormous, the author believing that tuberculosis kills more cattle and birds than all the sporadic diseases to which they are subject put together.

In 1879 the author expressed his views with regard to the flesh of consumptive cattle, in these words: "Under any circumstances the internal organs should be destroyed, and it is a matter of grave consideration whether the flesh of an animal suffering from even a slight degree of tuberculosis should not be condemned." [In this we cordially agree.] "As to the use of milk from animals in which tubercle is suspected to exist, no two opinions can be held."


At page 1087 instances are given in which it is likely that tuberculosis was conveyed by the milk of infected animals, one of the instances being a child of his own. He is of the opinion that the danger is often exaggerated, and that it is only urgent when the udders are tuberculous. He adds, however, that tuberculous disease of the udder cannot always be diagnosed.—*Edinburgh Medical Journal*.—JAMES NEVIN, in *Medical Chronicle*.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

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THOMAS F. WOOD, M. D., Wilmington, N. C.,
GEO. GILLET THOMAS, M. D., " } Editors.

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TREATMENT OF AORTIC ANEURYSM.

We have given a lengthy and well digested review of the treatment of aortic aneurysm from the *Medical Analectic*, as it sets forth the present status of the current knowledge of the subject. It has not been many years ago that the number of cases cured were so small and so doubtful that few physicians would give credence to the reports of successful cases. A patient who was found to have aortic aneurysm was certainly doomed at no distant day to a painful death. So desperate, indeed, had some surgeons become, that they

considered the introduction of a coil of wire into the aneurysmal sac as mild, or at least justifiable therapeutics.

Dr. Balfour's criticism on Dr. Suckling's treatment (see this JOURNAL, pp. 213, 214) brings out several practical points which may be emphasized with advantage. It is very true that the long-continued use of iodide of potassium in large doses—45 to 90 grains daily—causes a rapid pulse, especially in those persons confined to the recumbent position for the length of time required in the treatment of aortic aneurysm. The idiosyncrasy of the patient is to be taken as a measure of largeness of dose rather than the comparative number of grains.

The writer of this has found that iodism is accomplished in the same person in a variable number of days. For instance: beginning with seven drops of a solution of the iodide (equal parts of the salt and water, giving 4.5 grain to a drop) and increasing it up to 20 drops, at one time he had a run of four months before iodism and false pulse gave indications for withholding the drug; while on other occasions, with the same dosage, the run would be barely more than six weeks.

Dr. Balfour's statement that the addition of "Tuffrel's plan," that is, low diet and a measured quantity of water, is no improvement to the iodide treatment, but the reverse. This statement should be accepted with certain modifications, some of which he has stated. It is perfectly evident that if you put an otherwise healthy man on his back and confine him for three months, you must modify the amount of food he takes very materially. If you give him more nitrogenous food than he can appropriate, you subject him to the dangers of lithæmia, which may manifest itself only in an intermittent heart—and exceedingly alarming, if not very hurtful, symptom to a patient on his back with aneurysm—or it may attain to that more serious manifestation in an outburst of gout. The present writer recalls his great surprise when, after the recumbency of six weeks for aortic aneurysm, and the reduction of his food to what was considered a duly reduced proportion for the altered conditions of life, he had a sharp attack of gout for the first time in his life. It was so evident that he was getting an excess of nitrogenous food, that his diet was at once changed, and for the remainder of a recumbency which was prolonged to eighteen months and a partial recumbency for two months longer, a diet consisting of hominy and milk

and rice and butter and bread and butter, was not only sufficient to maintain proper nutrition, but entirely set aside lithæmic symptoms. Especially, do we think, that Dr. Balfour's statement of the importance of early recognition is the keynote to the situation. It, of course, makes a great difference whether or not the aneurysm comes from interstitial arterial change, or whether it is of almost purely traumatic origin. In the former case, if the patient be of somewhat advanced age, the hope of successful treatment is less, but even then, if we are fortunate enough to detect the presence of the aneurysm, and we can so impress the gravity of the disease on the patient as to get his consent to go to bed, there to remain almost indefinitely, very much may be done to promote his life in some degree of comfort. If, though, the aneurysm is of traumatic origin, and there be no constitutional vice whatever, and the patient will submit to a prolonged period of recumbency, there is no doubt that iodide of potassium, in doses regulated to the idiosyncrasy of patients, probably averaging, at the maximum, 15 grains thrice daily (always given in a good draught of water), can be relied upon with much confidence. The hint in the *United States Dispensatory* that Dr. Balfour's success with iodide treatment was because the patients probably were affected with syphilis, has no good foundation, and we are satisfied that the profession will recognize in this treatment, when applied to cases recognized early, a very great boon to patients who were formerly doomed to irremediable death.

THE POLICY OF ADMITTING YELLOW FEVER COLONIES INTO THE HIGH ALTITUDES OF ANOTHER STATE—THE MANAGEMENT OF A PANIC—THE RESPONSIBILITIES OF PHYSICIANS TO THE GENERAL PUBLIC IN SUCH TIMES.

North Carolina has now seen the experiment of colonizing yellow-fever patients in her mountain region. It was a voluntary act on the part of the citizens of Hendersonville to offer their town as a home of refuge to the stricken citizens of Jacksonville, although we learn that there was much opposition there among certain of the

people who had with much forethought weighed the possible consequences. Dr. L. L. Johnson, Superintendent of Health, who lives a few miles from the town, writes on the 22d September: "Our citizens were very much dissatisfied about their coming, but are now reconciled," showing that the invitation to come into the State was not unanimous. The preparations were not well matured, and the confusion was great, amounting at one time almost to consternation.

It cannot be doubted that it takes a great deal of confidence in the sanitary surroundings of a town to prompt an invitation for five hundred persons from a fever-stricken district to take up their residence in their midst: it also bespeaks an amount of philanthropy which cannot be estimated: but it may also indicate a degree of covetousness on the part of the few. It is highly probable that all these motives combined to open the doors of Hendersonville.

Now that the experiment has been tried and the results known, the question comes up, Is it good policy to allow such colonizations? The present opinion is decidedly adverse. Not that there is much danger, as far as the people of Hendersonville are concerned, but because of the risk of the refugees scattering all over the country with their baggage, making their way to seaport towns where they are not wanted, and where their presence is a menace to the public health. We believe there is no law on the subject of granting permission to refugee colonization, and there being no precedent, neither the Governor of the State nor the State Board of Health knew their duty in the matter, and in these cases the invitations had been extended by several towns before the State Board was acquainted with the facts. Nothing seemed to be left but to advise the towns actually about to receive the refugees what restrictions were necessary to avoid damage to sea-coast towns. Charleston and Wilmington both quarantined against Hendersonville, and altogether the presence of the refugees in the State was rather an uncomfortable experiment.

We did not remember that a like experiment had ever been tried in the country before, but Dr. Daniel, editor of *Daniel's Medical Journal*, reminds us that in 1878 "Holly Springs, Miss., did the same unwise thing with reference to the refugees from New Orleans." The occasion which drew forth the above remarks was the invitation that Atlanta proposed to extend to the Jacksonville people, an invitation to make their homes there. The experiment

in our State has not been attended with any disaster so far, and while it may not prove that pure mountain air is a safe-guard against yellow-fever, and it has not shaken the confidence of the people in the mountain section in the purifying effects of their air, it has convinced many who have the public health much at heart that the experiment should not be repeated. The State Board of Health expressed this opinion to Governor Scales, and we learn he has notified the proper authorities.

The management of a panic in seasons when pestilence is fastened upon towns with climate and surroundings somewhat similar to our own, is a most difficult business. Some persons delight to repeat stories which are most improbable, and after their story has gone on its round of mischief and comes back to them with its accretions, they reiterate it with as much gusto as though it were good news they were publishing. Stories of the most alarming sort reach them, the truthfulness of which they could verify by the smallest trouble, but they allow them to go unchallenged. We heard of the proprietor of a store who heard that a case of yellow fever was near him, the fact of which he could have determined by going to his telephone, he allowed to go unproven a whole day, distributing the false news to his customers, until by the close of the day his neighbor took to the usual expedient to frighten away pestilence—the burning of tar-barrels.

In the midst of all these panics physicians are looked to with some degree of confidence. The family physician is appealed to, by anxious friends, to notify them of the first case, and, indeed, many families in our town have been in light moving condition, ready to hurry off at a day's notice. Our physicians, therefore, have been obliged to act with greatest prudence, and fortunately the season has been one of remarkable exemption from sickness, the evidence of which is, that at this writing, September 28th, there had been only one application this month for permission for burial in Oakdale Cemetery (the largest burial place for the whites), this person dying of old age, and only two in Bellevue Cemetery, one of whom died of phthisis. There was only one incident to mar the course of the panic in the State, as far as the medical profession was concerned, and that was the indiscreet publication through the press dispatches of a supposed case of yellow fever near Burgaw. The State Board of Health sent an expert promptly to make an

investigation, and he reported it to be a case of paludal fever. Public confidence was easily restored, but there were numerous anxious enquiries by mail and telegraph, showing that the Boards of Health of other States were anxious lest the colony of refugees at Hendersonville had imparted the disease to other parts of the State. The affair needs no comment at our hands, as every judicious reader will be able to weigh the amount of damage such indiscretion does to the public peace, to say nothing of the neglect of constituted authorities and a preference for the more sensational medium of the press dispatches.

CORRESPONDENCE.

AN ANOMALOUS UTERUS.

Messrs. Editors North Carolina Medical Journal:

The patient is forty years of age, the very picture of good health, masculine appearance, considerable dark mustache, married eighteen years, but has never borne children. She suffered at times with extreme nervous excitement, palpitation of heart, etc. All of these symptoms are believed to be the result of sexual excitement without reaching a healthy culmination. The cause of this is explained in three words: *an impotent husband.*

The husband was advised to make frequent attempts at sexual intercourse with a hope that the desired result might finally be brought about. But this only excited the wife and made her nervous attacks more severe. The symptoms growing more and more alarming, I was called in. I ascertained that she was almost invariably seized with these attacks immediately preceding or following menstruation. Supposing that the cause might be, in part, due to some uterine trouble, I made an examination and found the following: The hymen was only partly ruptured, the vagina small and rigid, and it was with difficulty that the uterus could be satisfactorily examined, but, by the use of Erick's speculum, a full view was obtained. It was hard to determine what was presenting—a fold of lax membrane enveloping a hard body. A fold of membrane covered the vaginal portion of the uterus

similar to the prepuce in the male. When this had been stripped back, the cervix presented, but was not unlike a short and most perfect male penis. I asked the patient to go with me to Dr. Summerell's office, where a consultation was had. We were unable, under existing circumstances, to say whether, if the husband had been competent, the abnormal condition of the uterus would have prevented conception or no.

As to treatment, it would have been an easy matter to have divided the membrane which would have laid bare the cervix, but we thought as the patient was nearing the menopause and the husband impotent, we had better let it alone. I afterwards used a small ring pessary for a time, which kept the fold drawn back over the cervix, and now, on examining, the os presents, the fold of membrane is retracted. The menstrual periods are passed with little or no pain, and the general health of the patient remains good.

C. W. POOLE.

REVIEWS AND BOOK NOTICES.

THERAPEUTICS: Its Principles and Practice. By H. C. Wood, M.D., LL.D. A Work on Medical Agencies, Drugs and Poisons, with Especial Reference to the Relations between Physiology and Clinical Medicine. Seventh Edition. Philadelphia: T. B. Lippincott & Co., 1888. [Price \$6.00, cloth.]

This new edition of "Wood's Therapeutics" comes to us in a stout volume, augmented by the addition of nearly two hundred pages. The order of arrangement of material has been changed, so that what was formerly the second part is now made first, containing "general considerations, massage, metallo-therapy and feeding of the sick," subjects which have been for sometime foremost in general interest in periodicals, and here treated with such fullness of detail as only a practitioner of medicine could be expected to write. "The Treatment of Systemic States" succeeds in natural order the discussion of dietary, and include "Exhaustion and Neurasthenic Conditions," "Treatment of Corpulence," and "Lithiasis." The third and fourth chapters include a consideration of the uses of heat, cold and electricity. The

employment of "cold in pyrexia," always an interesting subject, includes much of the best thoughts on the subject of the treatment of fever by cold, and the reader will doubtless be struck with the fact that in the table showing the results of cold-water treatment in typhus and typhoid fever that there is only one American writer mentioned, the majority of the rest being German. The therapeutics of electricity is condensed into twenty-six pages.

Part II. is "a sketch of the natural history and pharmaceutical preparation of drugs, with an exhaustive study of their therapeutical and toxicological actions." The author has made an entirely new classification of remedies, which is simple and as good as any. A large number of new drugs has been added to the list of remedies, and the industry and judgment of the author is especially shown in the selection of these articles from the immense volume of them, and to treat them in a judicial manner. The condensation of the therapeutics of any new article, say *acetphenetidin*, for instance, as compared with some of the voluminous descriptions all roseate with the incomparable value of the new-comer, is as good a test as any of the hard work and thorough discrimination which the author has brought to his task.

The author still holds fast to his belief "that the employment of chloroform under ordinary circumstances is unjustifiable," and his whole tone reads more like prejudice than sound judgment. Thousands upon thousands of cases of anesthesia with chloroform are done all over the country, and the number of deaths is probably not much larger, if any, than from any other anesthetic. The state of general anesthesia is always dangerous, whether it be from ether, chloroform, bichloride of methylline or bromide of ethyl. This is being recognized more fully every year, and, although ether has been all the go in the North and East for a long time, chloroform is surely coming into favor by reason of its vastly superior advantages. It being dangerous to anesthetize a patient with anything, none but a most judicious assistant should be entrusted to administer the agent. But this is one of the agents about which there is a strong partisan spirit, and a man must be true to his colors.

It is but just to say that *Wood's Therapeutics* has been very thoroughly revised and enlarged, and, although always a favorite for the conciseness of the text and the reliability of therapeutic teaching, in its new dress it has excelled itself, and is likely to hold its own against all rivals.

DISINFECTION AND DISINFECTANTS: Their Application and Use in the Prevention and Treatment of Disease and in Public and Private Sanitation. By the Committee on Disinfectants, Appointed by the American Public Health Association. Concord, N. H., 1888.

Here is an authoritative volume on one of the most important subjects now interesting the general public and we bespeak for it a wide circulation. The members of the North Carolina Board of Health have been supplied with it, and for many years to come it will be authority on disinfection and disinfectants. Many a pet solution infallibly germicide has been demonstrated to be worthless, confusing and rebutting the theories of many of us.

The experimental researches of the Committee on Disinfectants extends over four years, and all practically outlined. Corrosive sublimate is studied by Dr. George M. Sternberg, and the results long ago given to the world, and have been practically demonstrated. He says that "a standard solution of 1:1,000 may be safely recommended for the disinfection of bedding and clothing which can be washed; for washing the floors and walls of infected apartments; for disinfecting the hands and instruments of surgeons and gynecologists, and as a disinfecting wash for superficial wounds or mucous surfaces. For continuous application to wounds, etc., a solution of 1:10,000, or less, should be effective." These facts are now so generally a matter of daily practice that we hardly remember the source of our information but it was upon the results of Dr. Sternberg's investigations that mercuric chloride was generally adopted.

Prof. V. C. Vaughan follows in "Considerations Concerning the Practical Use of Mercuric Chloride as a Disinfectant," in which he studies the possible dangers of contaminating wells by percolation through the soil, and also its action on lead pipes.

The next most important article is on the use of "Sulphurous Acid," by Dr. Sternberg and Dr. J. H. Raymond, of Brooklyn, a sub-heading by the latter being a very practical one: "Experiments on Burning Sulphur in Closed Rooms."

The second part of the report is for 1887, from the chairman, Dr. Sternberg, this report confirming much of the work reported done in 1885, especially that a solution of mercuric chloride 1:1,000, applied as a wash or spray, is the most reliable and the cheapest disinfecting agent for use in inhabited rooms.

Dr. V. C. Vaughan gives a practical article on ptomaines, and the

volume closes with the description of the quarantine methods adopted at the mouth of the Mississippi under the management of Dr. Joseph Holt.

The practical conclusions of the Committee are given on page 233, and a copious bibliography of the entire subject, with a full index. As all our readers will want to read this book, it is unnecessary to describe it more fully. Let them send their orders to Dr. Irving A. Watson, Concord, N. H.

A TEXT-BOOK OF HUMAN PHYSIOLOGY. By Austin Flint, M.D., LL.D. Fourth Edition. Entirely Rewritten. New York: D. Appleton & Co., 1888. Pp. 892. [Price \$6.00.]

It is a real pleasure to peruse as handsome a volume as this one; its pages are sumptuous, the type is clear and well-leaded, the illustrations are sharp-cut, and, although many of them well-known illustrations from Sappey, Hirschfeld and Waldeyer, the impression is as bright and as new as though they were originally prepared for this work. The author informs us that this treatise has been rewritten, and now but little remains of the original text. He has wisely curtailed the historical references, and, as far as possible, has avoided the discussions of unsettled and disputed theories. Dr. Flint has been a teacher of physiology for over a quarter of a century, and has as just a conception of the needs of the student class as a man could get, we believe, and the presentation of this volume will meet with the hearty approval of his old classes and the new.

The arrangement of the work is, first, the consideration of the characteristics of the blood, followed by a short account of the history of the circulation and the physiological anatomy and physiology of the heart—its movements, sounds, influence on the respiration, in conjunction with which is the physiological anatomy and physiology of the arteries and veins. One or two of the illustrations from photographs taken at the United States Army Medical Museum, Small artery and capillaries from the muscular coats of the urinary bladder of the frog $\times 400$ diameters, and Small artery and capillaries from the lung of a frog $\times 500$ diameters, are admirable specimens of micro-photography.

The fourth chapter takes up respiration and respiratory movements, and is concluded by the changes which the air and the blood

undergo in respiration. The chapter on Alimentation is not as extended as of late days has been the wont of physiological writers, but as therapeutical text-books also consider the subject of dietetics and the food-value of certain articles of diet, it is as well that the physiologist only lay down the general principles. We would have been pleased to have found a more distinctive utterance on the use of alcohol. The author does say, though: "Under ordinary circumstances, when the organism can be adequately supplied with food, alcohol is undoubtedly injurious. When the quantity of food is insufficient, alcohol may supply the want for a time and temporarily restore the powers of the body; but the effects of its continued use, conjoined with insufficient nourishment, show that it cannot take the place of other assimilable matters."

The all-absorbing interest of physiology centres around the processes of digestion, assimilation and secretion, and upon these the author has expended a large degree of his talents successfully. The familiar story of Alexis St. Martin with the gastric fistula, through which orifice came revelations that laid the foundation of modern principles of digestion occurred only sixty-three years ago, and it attracts still a degree of interest that hardly attaches to any other item in the wonderful history of digestion. Two hundred and more pages are devoted to this branch of the subject, including excretion, and it is highly satisfactory. We encounter as we read fewer peculiar views of the author, and as we go along through the pages we are struck with the evident desire to prevent the present status of the science in as harmonious grouping as the nature of the subject will allow.

Conscientious teachers of physiology have often given text-books to the world, which, when submitted to the test of actual class-teaching, were found to have superior chapters and sections, these generally of topics which the authors had pre-eminently mastered, but falling far below in other chapters. Text-books of such unequal merit are, we trust, things of the past. The student does not like to be told that he must go to one author for the physiology of this special function, and to another for some other, but naturally expects the aid of one author who can reasonably be relied upon to present the whole topic in its due proportion and perspective. Such a book is this fourth edition of Flint's Physiology. It has less of physiological chemistry than was attempted in former editions, but cor-

rectly enough the author points out that this department has now become "a science by itself," and would inconveniently increase the bulk of a volume designed for medical students.

America has now given three excellent text books on physiology to the world, and as the work in the newly established physiological laboratories is pursued more zealously by the new army of students, we may expect to see original work increasing in importance and our teachers more and more liberated from the domination of European schools. We are satisfied that when this book is placed side by side with the text-books which are now so highly commended, it will receive the favor of our best teachers. We have not presumed to make an analysis of such a large volume, but have desired to examine it impartially, as we would do when seeking the best text-book for a student, and as such we can candidly say that we know of none better, and because its pages are unencumbered by the technical details of physiological apparatus, it will probably suit the needs of the greatest number of students.

THE PHYSICIAN'S LEISURE LIBRARY. (1) Abdominal Surgery. By Hal. C. Wyman, M.D.; (2) Diseases of the Liver. By Dujardin-Beaumetz, M.D.; (3) The Theory and Practice of the Ophthalmoscope. By J. Herbert Claiborne, Jr., M.D.

Dr. Wyman shows how to begin the study of abdominal surgery by experiments on rabbits and dogs. He gives the necessary details for antiseptic work, and in relation to the vivisection surgery on animals, advises against taking heed to anonymous letters he may receive upon the subject, but "Be sure you are right, then go ahead."

His brief description of intestinal sutures is as follows: "It should begin one-quarter of an inch from the margin of the intestinal wound, and should come through the peritoneum at the edge of the intestinal wound. It should then be carried across the wound and again penetrate the peritoneum near its edge and after embracing about a quarter of an inch. When it is tied two surfaces of the peritoneum are approximated; the mucous membrane is thrown into the bowel and the cut surfaces of the peritoneum are in perfect apposition. The suture should be of fine material and should be introduced at intervals of one-fourth of an inch."

In regard to the propriety of abdominal surgery, he says:

"Abdominal surgery, as I believe, should be practiced (in its present state of development, at least) as a last resort, and so practiced the most successful operator, in my opinion, will be the one who is quickest to decide accurately when death is at hand, when the "last resort-opportunity" is offered

2. This translation by Dr. E. P. Hurd, of the work of the renowned therapist Dujardin Beaumetz, on "Modern Treatment of Diseases of the Liver," is destined to be widely read. He treats "The Liver from a Therapeutic Stand Point," "Cholagogues" from a physiological and clinical stand-point; "Treatment of Biliary Lithiasis," "Jaundice," "Engorgement of the Liver," "Inflammation of the Liver," and "Treatment of Hydatid Cysts." The whole subject is compressed into the compass of 184 pages of a little volume like the Franklin Square Library, with complete index.

3. "The Theory and Practice of the Ophthalmoscope," by Dr. J. H. Claiborne, Jr., is told in 77 pages, with appropriate illustrations, recites the practical story of the ophthalmoscopy in a very elementary way, adapted to the use of beginners. If it, and similar treatises, would induce general practitioners to employ the art more, it would do great good; for, as a general thing, the ophthalmoscope is not used by physicians, and many times for the lack of this elemental knowledge our patients fall into the hands of specialists, to our discredit.

The "Leisure Library" is convenient in size, and covers a useful range of practical medicine.

THE NATIONAL FORMULARY OF UNOFFICIAL PREPARATIONS. First Issue. By authority of the American Pharmaceutical Association. 1888.

This collection of formulas is designed to represent preparations which have considerable local celebrity and are in common use by physicians and by the people for self-medication. It had for its basis a book of formulas published by the College of Pharmacy of New York, the King's County Pharmaceutical Society, and the German Apothecaries' Society of New York, and to this was added formulas collected by members of the American Pharmaceutical Association.

We have examined the work with much interest, and find a large number of most excellent formulas, and some which must have been

added for the convenience of druggists who have to supply all sorts of popular demands. Very few of the formulas have been added from the South. We might mention "Mettauer's Aperient," which is known as *Liquor Aloes et Sodæ*, a preparation that is largely used in some localities; "Osborne's Syrup" of Rhubarb, which is an aromatic rhubarb syrup containing bicarbonate potash and paregoric, is a domestic remedy largely used in Eastern Carolina as a popular remedy, and is often used by physicians as a vehicle for powders in the bowel complaints of children. We trust that a thorough canvass will be made by the pharmacists of the South, and bring to light the numerous old preparations which have stood the test of time, that they may be added to the lists which are before us.

The "Elixir of Yerba Santa," here given under its Latinized title, "Elixir Eryodacti Aromaticum," is largely in use to cover the taste of quinine, strychnia and other bitter medicines, and as a general vehicle, is very properly introduced here, but the formula given is not as good as the one now in use by so many of the pharmacists of this city.

The fluid extract of *Rhamnus Purshiana*, which was so overwhelmingly opposed in the revision of the Ph. U. S., is here introduced, it having long ago become one of the very useful drugs in common use by the profession.

A knowledge of the contents of this volume, both for the pharmacist and the doctor who has to prepare his own medicine, as many do in North Carolina, would give him large resources of elegant preparations, for many of which he would otherwise have to search many sources of information.

USE OF ANTIPYRIN ASSOCIATED WITH QUININE.—If antipyrin be added to the mixture in cases when it is desired to give large doses of quinine (15 grains and upwards), the uncomfortable effects to which the latter often gives rise are avoided. Dr. Derlon gives 3 grains of antipyrin to 5 of quinine. The antipyretic effect of the quinine is increased, and the symptoms of quinism do not occur. Moreover, the combination is better borne by the stomach, and it is believed that "antipyrin modifies the reflex actions starting from the mucous lining of the stomach."—*London Medical Record*.

CURRENT LITERATURE.

REMOVAL OF TATTOO-MARKS.

The removal of tattoo-marks has always been considered a very difficult feat. Many methods have been recommended at various times, a pretty sure sign that none of them is very satisfactory. Dr. G. Variot, of the Paris Biological Society, has recently proposed a new process, with which he claims to be very invariably successful in removing blue and red tattoo-marks. Without hazarding an opinion beforehand, one must admit that the method is based on apparently sound principles. But it is, perhaps, well here to remark that Dr. Variot is attached to the central infirmary of the Paris prisons, and therefore in excellent position to experiment with such disfigurements, since, for some inscrutable reason, criminals, who have most to fear from identification, are just the men who most often brand their persons with indelible marks. Dr. Variot operates as follows: The tattooed parts are first wetted with a concentrated solution of tannin, and with a set of tattooing-needles the skin is punctured all over the colored portions to the depth usually adopted by professionals. All the parts tattooed with tannin are next rubbed over with the lunar-caustic pencil, the silver salt being allowed to act upon the epidermis and derma until the needle-pricks have turned a deep black. The excess of liquid being now wiped off, things are allowed to follow their natural course. The whole surface treated will soon turn black. The pain, quite moderate during the operation, will be slight for the first two days, and accompanied with some local inflammation. After the third or fourth day no more pain is felt, and, unless for large marks, no dressing will be necessary. After fourteen or eighteen days the eschar will fall off, and leave, instead of the tattoo-marks, a reddish superficial cicatrix, which will gradually turn paler, and, after two months, almost disappear. On close scrutiny it will probably remain always perceptible, but it will otherwise be scarcely noticeable, and, at all events, the skin will show no trace of the former emblems, more or less artistic.—*Extract from Paris Correspondence of the Therapeutic Gazette,*

OPERATIVE TREATMENT OF PULMONARY ABSCESS.

The success which has so far attended the treatment of abscesses in the lungs by operation constitutes the latter a legitimate department of surgery. Dr. Quinke, of Kiel, reports two cases thus successfully treated during the past year (*Berliner Klin. Wochenschrift*, No. 18, 1888). A year ago Dr. Quinke also reported two cases treated by operation (*Berliner Klin. Wochenschrift*, No. 19, 1887). Taking this latter pair of cases first, in one a young man had a chronic abscess in the lower lobe of the left lung, apparently due to acute pneumonia two years previously. The abscess was opened, resection of the ribs being performed, and the man recovered in so far that he was able to work and felt quite well, but a permanent fistula remained. The inconvenience of this the man himself obviated by making a small tin receptacle, attached to his side, holding a little carbolic acid. When examined three years after the operation, the lungs expanded equally, and the chest was symmetrical except for a slight depression over the site of operation. There was no expectoration. The importance of securing adhesion of the pleural surfaces is shown by the next case, treated in 1887. Here the patient, a woman, aged 26, presented all the clinical signs of a large pulmonary abscess, including the expectoration of a large quantity of fetid pus. An attempt was made to set up an adhesive pleuritis by the injection of iodine into the pleural cavity. This caused pain, and a friction sound was heard; but the adhesions gave way soon after the abscess was opened, and purulent pleuritis caused death in three weeks, in spite of incision and injections. The author, with its present experience, would resect the ribs at the site most convenient, and reopen the abscess, in such a case. It is more difficult to induce firm adhesion of the pleuræ than in the case of the peritoneum, owing to greater disturbance during respiration; and the adhesions must be really firm, in Dr. Quinke's opinion, so as to withstand the elastic retraction of the lungs from the chest wall. Complete success was obtained in the two cases treated last year. In the first of these a man, aged 32, after symptoms of apparently an atypic pneumonia of a chronic character, suddenly expectorated a very large quantity of fetid pus, and the clinical signs left no doubt as to the existence of a pulmonary abscess, and not an empyema communicating with a bronchus. Radical measures

were adopted; the eighth and ninth ribs were exposed on the right side, by the use of chloride of zinc, after preliminary incision. They were then resected for four or five centimètres, and next day chloride of zinc paste was again applied to the bottom of the wound. After a week a capillary thread was introduced, allowing the escape fetid pus, and the canal thus formed was gradually widened by the thermo-cautery till a proper drainage-tube could be passed and the pus evacuated. Within three weeks expectoration ceased altogether, and the man, who had improved daily during this time, convalesced steadily. The right side did not expand quite as fully as the left four months after operation; but the patient had gained 46 pounds in weight, and felt quite well.

The other case was not so typical, but is also instructive. A man, aged 23, had an acute illness, the symptoms of which pointed to either abscess of the lungs or empyema communicating with a bronchus. But a friction sound persisted; exploratory puncture yielded no pus, and the muco-purulent sputa often held blood. Cavernous signs were absent at first. The illness was too acute for bronchiectasis. The operative treatment was the same as the foregoing, and, after six weeks, the patient was sent home cured. The left side (the side affected) expanded a little less than the right; the wound had quite healed, and there was no expectoration. In this case the first incision was made in the ninth intercostal space, and chloride of zinc paste was frequently applied for eighteen days before the ninth rib (now laid bare) was resected about an inch. The abscess was never opened in this case, for the insertion of a hollow needle twice yielded no pus, and the man improved steadily from the date of operation, so that further interference was deemed unnecessary. Dr. Quinke considers such an operation suitable for bronchiectatic and tuberculous cavities. Such treatment in these cases has not met with much success hitherto, because the lung is usually in too diseased a condition around the cavity to effect its closure by elastic compression. The chloride of zinc applications, by setting up local inflammation, induce the same effect ultimately by cicatricial contraction, and therein lies the chief advantage of this mode of operating.—*British Medical Journal*.

WHEREAS in 1866 there were only 6,506 physicians, surgeons and chemists in Paris, there are now, it appears, 10,360.

THE MODERN PHYSICIAN.

[From Dr. W. T. Gairdner's Presidential Address, delivered before
the British Medical Association.]

The physician of the future will, I believe, be much more, instead of less, inclined to study the Bible than hitherto, and in this respect will differ greatly from the representative and typical "Doctour of Physike" of the "Canterbury Tales." But he will study it in the spirit of modern scientific freedom and of historical research, not under the influence of mere tradition and ecclesiastical authority. And thus only, as it seems to me, can the reconciliation of science and religion ever be brought about.

The physician of the future will do well if he remembers always the pernicious despotism which has been exercised over his own art (though in a minor degree) by the fetters of these dead orthodoxies, and will therefore be very slow to acknowledge their claims upon him to any more than a historical regard, even in the realms of theology. He will say to them, in the noble words of the Westminster Confession, which (but for the formula connected with it in our Scottish churches) might almost be taken as the Magna Charta of Christian liberty in all such documents—"All synods and councils since the Apostles' times, whether general or particular, may err, and many have erred; therefore they are not to be made the rule of faith or practice, but to be used as an help in both." But I desire you very specially to remark, as my own personal anticipation, shared, as I have no doubt, by many of those now present, that the physician, in his character of student of Nature, will make, and in the end will establish, this claim to emancipation, not in virtue of any irreverent, much less atheistic, tendencies, but for the very reason that he has access to a revelation of God distinct from the written revelation, and requiring a wholly distinct method of investigation. In obedience to this call, he will, sooner or later, absolutely decline to walk in the leading-strings of ecclesiastical tradition. And in so doing he will (far from fulfilling old Dan Chaucer's satirical description) studiously insist upon the Bible, and especially the New Testament, and, above all, the recorded life, words and works of our Lord himself, as containing by implication the character of his emancipation, and the only perfectly free religious atmos-

phere as yet opened to human thought and inquiry. In proof of which I will now only submit one pregnant saying, with which, if it be indeed the word of God, all those who believe it to be such are bound to find all the other words of God in entire accord—"Henceforth I call you not bond-servants, for the bond-servant knoweth not what his Lord doeth; but I have called you friends, for all things that I have heard of my Father I have made known unto you" (John xv., 15).

CARDIAC DYSPNŒA.

Fraenkel (*Berliner Klin. Wochenschrift*, 1888, 289, 315), in an address on this subject, says that dyspnœa appears in very different forms in the different heart diseases, depending on the nature of the affection. It is sometimes premonitory, but is then slight and only occasional; and disregarding this, we may distinguish two forms of severe dyspnœa, the *continual* and the *asthmatic*. The first is especially well seen in stenosis of the mitral valve. This lesion is the least apt to attain complete compensation, and even when this occurs it is by hypertrophy of the right ventricle and necessarily with overfilling of the pulmonary system. The distended pulmonary capillaries project into and narrow the cavity of the alveoli, and this contraction of the alveolar space, together with the slowing of the blood current, and the lessening of the proportionate surface exposed to oxygenation, produces the continual dyspnœa. Digitalis in this lesion sometimes acts very badly, since by stimulating the right ventricle and sending more blood to the lungs it only increases the shortness of breath. Other cardiac affections also are accompanied by continual dyspnœa, as, for example, cases of progressive failure of the left ventricle with consequent engorgement of the pulmonary system; as is seen in the last stages of cases of "cardiac overstrain," or in heart diseases resulting from psychic depression.

Cardiac asthma, on the other hand, is seen most typically in hypertrophy of the left ventricle with abnormal resistance in the blood-vessels, resulting from arterio-sclerosis. The asthmatic attack comes quite suddenly and usually at night, waking the patient from

sleep, and is generally very severe. The lungs are found full of coarse râles, and respiratory pauses may occur like those of Cheyne-Stokes respiration. The affection often resembles bronchial asthma greatly, but may be distinguished by the high tension of the vessels, the absence of expiratory dyspnœa, and often by the discovery of a dilated left ventricle, though this is not always easily detected, owing to an increase in the volume of the lungs. This enlargement is due to the fact that through the narrowing of the arteries the blood is driven into the venous system, or, rather, into the lungs and the left auricle. Hence there is a permanent engorgement of the pulmonary circulation, even when there is complete compensation. The sudden asthmatic attacks are probably due to a sudden temporary insufficiency of the left ventricle, brought about by psychic emotion, increasing catarrh, or some other cause. The heart is already doing its utmost, and this disturbance of the balance produces increased passive congestion and consequent dyspnœa. Autopsies have shown that the heart muscle is of normal structure, and it would, therefore, seem likely that the failure is due to paralysis of the cardiac nerves or ganglia. Fraenkel cannot accept the theory of Basch, that cardiac dyspnœa is due to a rigidity of the lungs from their being overfilled with blood; this producing an insufficiency of the respiratory muscles.

Regarding the therapeutics, the author repeats what he has formerly said in praise of morphia and digitalis in combination. The former diminishes the arterial tension, prevents the exhaustion of the respiratory centre by the continued dyspnœa, and cuts short the asthmatic attack, while the latter stimulates the ventricle to greater activity. Calomel may also be employed for its diuretic and purgative action, thus depleting the system; and though somewhat uncertain, it always benefits that patient to whom it has formerly done good. Strophanthus has been of no value in dyspnœa in the author's experience, except in those cases in which it produces free diuresis. As regards uræmic and dyspeptic asthma, the former is simply cardiac, and has nothing directly to do with uræmia. Cases of the latter have been reported by Henoeh, and seem to depend on the presence of undigested masses in the stomach; the affection being relieved by vomiting after lasting one or two days.—*American Journal of the Medical Sciences.*

RELATION OF DRUGS TO THE SECRETION OF BILE.

As is well known, there is no therapeutic question in regard to which so much doubt and disagreement prevail as that relating to the action of drugs on the biliary secretion, or, as is commonly said, on the liver. Observers have so contradicted each other that one hardly knows where to look for truth. Perhaps the experiments of Rutherford have been most generally accepted. Recently Prevost and Binet have published the results of most exhaustive inquiries into the subject, controlling and testing the results of all previous experimentation, particularly that of Rutherford. The experiments are given in exact detail, of much interest from a physiological point of view, and those interested may refer to the original articles (*Rev. med. de la Suisse, Rom.*, May, June and July, 1888). The method employed was to establish a permanent fistula from the gall-bladder, the track of which was opened from time to time for the experiments. The authors lay stress upon this, as they claim for the method advantages over the *canula* in the estimation both of the normal flow and that under medication. In confirmation of the statement of Röhmann the infliction of the biliary fistula has been consistent with the preservation of good health in the animals, if only fat is withdrawn from the diet.

Bile itself, Prevost Binet find to be the most powerful cholagogue, whether given in the natural state or in the form of a dry extract. If this be true, and it is only confirmatory of what many other observers have asserted, a good deal of doubt is thrown upon the conclusions of Rutherford, since he, believing the ingestion of bile to have no influence over the secretion of bile, actually used it as a vehicle for many of the drugs with which he was experimenting. Bile is also toxic in sufficient doses, subcutaneously, and will produce death, with symptoms of collapse. The intestine higher up is found, post-mortem, full of bile; lower down, full of a diarrhœic matter, often bloody; sometimes the urine is bloody.

The following substances [Group I.] these observers have found to increase the flow of bile, viz: urea (in a single instance, c. accompanying severe gastro-intestinal trouble); oil of turpentine and terpene (on the supposed action of ol. terebinthin. on the biliary secretion is based the treatment of biliary lithiasis after the method of Durande. The present observers find that turpentine and its derivatives produce

a "notable" increase in the secretion). Chlorate of potassium, which also has long possessed reputation as a cholagogue, increased the flow by once or twice the normal. Further, benzoate and salicylate of sodium (two or three times the normal), salol, euonymin and mascurin (subcut.).

Group II.—Substances producing only a slight or doubtful and inconstant increase are, alkaline salts; carlsbad salts, propylamine, antipyrine, aloes, cathartic acid and rhubarb; *hydrastis canadensis*, ipecac. and boldo. Thus cathartics and the alkaline salts, which Rutherford considered cholagogue in non-cathartic doses, these observers found lacking in any such power.

Group III.—Substances diminishing the secretion—iodide of potassium, calomel, iron and copper, atropine and strychnine. In regard to calomel, the writers have not been able to confirm Rutherford, who believed that what cholagogic action calomel had was owing to the transformation into corrosive sublimate. The last-named substance given by itself produced no increase.

Then follows another group of substances which are without action. In regard to the elimination of drugs through the bile, the conclusions of the observers are that it is unimportant, the quantities being so small. It is interesting to note that they found ox bile present in the bile of a dog which had taken it. There is no constancy between the elimination of a substance in the bile and the effect of the same on the cavity of secretion. The subject appears to have been particularly well studied, and the paper and its conclusions deserve attention.—*American Journal of the Medical Sciences.*

LOCAL ANÆSTHETIC ACTION OF ANTIPYRINE SUBCUTANEOUSLY.

Wolff (*Ther. Monhft.*, June, 1888, p. 279) attributes to antipyrine a local action over pain equal, if not surpassing, that of morphia. In acute rheumatism, an injection in the neighborhood of the affected joint relieved the pain in three to five minutes, so that, e. g., the patient could without pain raise an arm that was previously helpless. The chest pains of phthisis he saw relieved in five minutes and permanently,

and the stabbing pains of pleurisy, etc., so assuaged in a few minutes that a satisfactory examination, previously interfered with by the shallow breathing, was made possible. In muscular rheumatism, in a large series of cases, the pain disappeared after a few minutes, either not to return at all or in a much more moderate degree. We believe that it would be useful for purposes of exact diagnosis in all painful examinations, e. g., fresh fractures (*vide* August number); likewise in neuralgias of superficial nerves and in asthmatic attacks the results were extremely satisfactory.

In short, it is of the greatest possible use in all superficial localized pains that one wishes to relieve quickly, for its action follows within five minutes, persists ten to twelve hours, and if then the pain returns, it is much modified. The solution is made of 50 per cent. strength in boiled distilled water and filtered several times. A syringeful of gr. viij is given, but oftentimes one-half the quantity is sufficient. No bad effects from the antipyrine were observed, but locally the injection causes, in all cases, some burning pain, which is often intense.—*American Journal of the Medical Sciences.*

A NEW EXPLOSIVE.—A new explosive, called carbonite, has been invented by a Rhenish firm. It has just been tried in the Saxony coal mines, and is said to have the advantage of not setting coal dust or fire-damp on fire.—*The Pacific Record of Medicine and Surgery.*

REACTION OF COTTON SEED OIL.—A small quantity of the oil is mixed with an equal quantity of a saturated solution of normal lead acetate; ammonia is then added, and the whole shaken. Under these circumstances cotton-seed oil assumes a reddish orange color, whilst butter, olive, castor, almond and other oils give a red color.—*M. Labiehe in Arch. de Pharm. and J. S. Chem. Ind.*

DIABETES MELLITUS, or true diabetes, is treated by Vigier by pills made as follows: Carbonate of lithium, 160 grains; arseniate of sodium, 165 grains; extract of gentian, 80 grains. Mix and divide into 100 pills, of which one is to be taken every morning and evening, the use to continue for sometime after sugar has disappeared from the urine.—*The Pacific Record of Medicine and Surgery.*

HOW INTESTINAL TUBERCULOSIS IS CAUSED BY SWALLOWING SPUTA.

Dr. Mosler, of Griefswald, communicates a paper to the *Deutsche Med. Wochenschrift* on the infection of the intestinal mucous membrane from the swallowing of tuberculous sputa. In one case, which he treated in hospital, the patient, who was rather stupid, could not be persuaded into ejecting the sputum, but invariably swallowed it, in quantities which other symptoms showed to have been very great. Ten days after his first attack of cough with expectoration, diarrhœa and severe colic came on, which was relieved by opiates and other appropriate remedies, but which, nevertheless, went until death occurred in eight days. Distinct signs of tubercle were found in the lung, but in no other part of the body except abundantly in the intestines, and the jejunum. Mosler attributes the presence of tubercle in the intestines in all cases more to the swallowing of the sputa than to a general infection. He has not as yet succeeded in producing tuberculosis of the intestines in animals by feeding them on tuberculous sputa and pieces of solid tubercle, but in one case it caused considerable inflammation of the stomach and small intestine. A tonic prophylactic treatment, in the direction of the bowels, is indicated, as tubercle chooses the weakest organ for its development. The case cited had gone through an attack of typhoid fever some little time before, which might have predisposed to the infection.—*The Pacific Record of Medicine and Surgery.*

LACTIC ACID IN THE TREATMENT OF TUBERCULAR DIARRHŒA.

MM. Sézary and Aune have reported (*Lyon méd.*, No. 35, 1888) some noteworthy results with lactic acid in the treatment of diarrhœa in tubercular patients. The action of the acid in local manifestations of tuberculosis has already been noted many times. Laryngologists have for many years been curing tubercular ulcerations of the larynx with concentrated solutions; and recently Blanc, chief of clinic Leon Tripier, has observed the remarkable effects

produced by it in tubercular ulcers of the tongue, when used in concentrated solutions. Struck by these facts, the authors decided to try and discover whether it might not be the long-sought-for specific for tubercular ulceration of the intestine—the parasiticide of the bacillus of Koch. The lactic acid was administered as follows: Commencing with a dose of 2 grammes in a solution of 120 grammes, if that was found to be insufficient it was rapidly increased to 6 or 8 grammes, taken in teaspoonful doses during the twenty-four hours. With this dose the patients complained often of gastric disturbance and setting of the teeth on edge, which disappeared by adding 1 gramme of chlorodyne to the solution. After the second day the passages diminished in frequency, and they became normal about the fourth day, and remained so. Nine very successful cases are reported.—*New York Medical Journal*.

SPLENECTOMY.

A successful operation for the removal of a floating spleen has been performed in Trieste by Liebman. The patient was a woman, aged 28 years, who in her third pregnancy noticed a hard round tumor in her abdomen toward the left side, below the level of the umbilicus. For sometime the swelling remained stationary, but five months before she came under the care of Dr. Liebman it began to grow rapidly and to cause great pain, especially when she moved about. She became quite unfit for work, and on November 24, 1887, was admitted into the Ospedale Civico. On examination, the liver and spleen appeared to be normal in size, the area of dulness corresponding to what was supposed to be the latter, extending in the left axillary line from the eighth to the tenth rib, whilst its vertical diameter seemed to be about seven centimetres. The abdomen contained a roundish but somewhat oblong tumor about the size of a small adult head, which appeared to rest on the upper margin of the pelvis. The mass, which was situated rather to the left of the middle line, was evidently intraperitoneal. Its surface was smooth, with a kind of notch in the middle. It was movable in every direction, and could be carried up to the margin of the ribs on the right

side as well as on the left, but could not be pushed into the hypochondrium beyond that point. There was no adhesion to the abdominal wall in front. A distinct systolic *bruit* could be heard over various parts of the mass. The uterus was normal, but followed the tumor when the latter was pushed toward the right, but not when it was carried over to the left side or in an upward direction. The tumor could be freely handled and moved about without pain. There was no albumin in the urine, of which rather more than a litre was passed in the twenty-four hours, and there was no disturbance of digestion. A diagnosis of ovarian or mesenteric tumor was made, and laparotomy was determined on. On December 13th Dr. Liebman opened the abnormal cavity by a median incision eighteen centimetres in length, and divided the peritoneum, which was remarkably thin and transparent along the whole length of the wound. The ovaries were atrophied, and neither they nor the uterus had any connection with the tumor. On drawing the latter out of the abdomen it proved to be spleen, enlarged to four times its natural size, whilst *in situ* its convex surface had been directed upward and forward, and was adherent for a great part of its extent to the omentum. The mesenteric vessels were tied and all the attachments of the tumor carefully divided between double ligatures, till only the pedicle (formed by the vessels, etc., entering the hilum), which was as thick as the little finger, remained. This was then divided into three bundles, each of which was tied separately, the end of the last ligature being finally passed round the whole for additional safety. The pedicle was further secured by a second ligature two centimetres and a half higher up; and, lastly, it was again tied close to the spleen. It was then divided between the two last-mentioned ligatures, and the spleen removed. The organ measured seventeen centimetres in length and ten in width, and weighed 600 grammes. Having satisfied himself that there was no blood in the peritoneal cavity, the operator closed the abdominal wound with seven deep sutures, taking in the peritoneum, and five superficial ones. A Listerian dressing was applied. The patient rallied from the operation, and, with the exception of a good deal of tympanites, did well till the eighth day, when the sutures were removed, the wound having healed without suppuration. On the night of December 21st menstruation began. A good deal of pain accompanied the discharge, and there was some pyrexia. Soon

extensive parametritis set in, which, however, yielded to general treatment. The patient remained weak and anæmic for sometime, but finally left the hospital completely cured on March 25th.—*British Medical Journal*.

THE ALKALINE TREATMENT OF YELLOW FEVER.

It is a fact true of yellow fever, as well as of all self-created fevers, that treatment must be individualized, and must be more or less symptomatic. Any attack of yellow fever cannot be regulated by any measure at present known. Experienced physicians will feel some doubt of the value of any routine line of treatment, no matter how well supported by theory and statistics. Dr. George M. Sternberg, however, has ventured to propose a special treatment for yellow fever based on certain pathological and physiological considerations (*Therapeutic Gazette*).

It is well known, he says, that in yellow fever the urine and the vomited matters are highly acid. The intestinal contents, also, have usually a more or less decided acid reaction. A microbe, therefore, capable of multiplying in the stomach and intestine in this disease must be able to grow in an acid medium. But aside from this theoretical reason for prescribing alkalies, the highly acid condition of the secretions furnishes an indication for such a treatment; and Dr. Sternberg therefore proposes the following formula :

R̄.—Sodii bicarb..... 10 grms. (gr. 150).

Hydrarg. chlorid. corrosiv..... 2 ctgm. (gr. 3-10).

Aquæ puræ..... 1 litre (1 quart).

M. Sig.—Fifty grammes (about oz. 1 $\frac{3}{4}$) every hour; to be given ice-cold.

The house-physician at the Garcina Hospital has sent a record of twelve cases treated by the alkaline and bichloride method, and it appears that all of them recovered. While these twelve cases were being treated, and a little before, eight cases were treated in the same institution by other methods, and five of the eight died.

It is admitted that the bichloride in safe doses does very little

toward intestinal antisepsis, and the formula above given is not a rational one, so far as intestinal disinfection is concerned. But the results, so far as reported, are creditable to the alkaline method.—*Medical Record.*

SURGICAL TREATMENT OF PERITONITIS.

Leucke, of Strasburg, reports a case of peritonitis coming under his observation, treated by operative procedures, occurring in a youth of sixteen, who drank a glass of beer, and soon afterward felt a severe abdominal pain. He was admitted into hospital with all the signs of acute peritonitis; temperature 106° . The abdomen was opened the same evening and half a litre of pus removed; it was then washed out with a weak sublimate solution, and a thick drainage-tube was placed in Douglas's pouch. The patient went on well for six weeks, when a subphrenic abscess developed on the right side, which soon broke into the pleural cavity. Resection of the seventh rib was performed, and drainage instituted with perfect success. There was doubtless a latent intestinal ulcer with first perforative peritonitis, and, subsequently, localized peritonitis, which broke through the pleura. Dr. Heuser, of Bremen, has lately operated in three cases of perforation of the vermiform appendix. Two of the operations were successful, but in the third there were metastatic abscesses in the liver, which soon caused death. In each case the abscess was sharply defined, though without extensive adhesions. Dr. Heuser thinks that many such cases which end fatally might be saved by surgical treatment. Professor Czerny, of Heidelberg, operated in perforative peritonitis in an obscure case; a large quantity of odorless gas escaped, and the stomach was found adherent to the liver and anterior abdominal wall. The intestines were normal. Unfortunately no attempt was made to free the stomach, and the patient died on the fourth day. On post-mortem examination there was found a gastric ulcer and subphrenic peritonitis. An odorless gas in such cases indicates perforation of the stomach; a fetid gas intestinal perforation.—*British Med. Journal.*

NOTES.

TO REMOVE ANILIN STAINS.—Dissolve 7 parts sodium nitrite in 15 parts dilute sulphuric acid and 500 parts of water. Let stand 24 hours. Apply with camel's-hair brush, rinse thoroughly.—*Dr. Ztg., Pharm. Era.*

CHLOROFORM WATER, having antiseptic properties, is a good menstruum for hypodermic doses, and is said to be less painful than water.—*American Druggist.*

DETECTING PUS IN URINE BY GUAIAK.—Mix suspected urine with such a quantity of tr. guaiac as to give a decidedly milky appearance. Warm to 90°–104° F. If pus is present it assumes a blue color.—*Bollet. farmac.—Am. Druggist.*

THE *Pharmaceutical Era* for September gives wood cut portraits of 30 presidents of the American Pharmaceutical Association, together with the President-elect for 1888-'89, and the Secretary, besides other men eminent in the profession of pharmacy.

TEST FOR ACETANILID.—Dissolve 0.1 grs. of the substance in 3 cc. hydrochloric acid and a little chloroform; when the mixture becomes turbid or milky, vanishing upon shaking, after a time, white, glistening needles separate.—*Pharmaceutical Era, September.*

CASTOR OIL BEANS are known to be poisonous, but it is only recently that the poisonous principle has been isolated and called *ricin*. In toxic doses of the seeds causes severe vomiting and prostration, but no purging. The poisonous dose is about 1-10 grain, equal to about ten ordinary seeds.—*Pharmaceutical Journal.—American Druggist.*

YELLOW FEVER IN JACKSONVILLE.—*The Medical Record* of 22d September says that the fever in Jacksonville is reported to be of a very malignant type: 12.6 per cent. is not considered a high mortality. "The disease is spreading in Hendersonville, S. C.," is also a mistake. Hendersonville is in North Carolina, and the disease is confined to the refugees who brought it there, two having died out of the ten who were seized after arriving in the mountains.

TEST FOR TANNIN.—Mr. S. J. Hinsdale's volumetric test for tannic acid, in the last *American Druggist*, is simple and practical.

TO DISSOLVE more boric acid in water, add about one-twelfth of the weight of calcined magnesia to boric acid and water: boric acid 120 parts, calcined magnesia 10 parts, distilled water 750 parts.

"ELECTRICITY vs. TAIT on the Use of Electricity in Inflammation as found in Gynecology, by Dr. George F. Hulbert, of St. Louis," is the name of a pamphlet which gives the details of the technics of electricity as applied to diseases as above indicated, with several illustrations. It is a pamphlet of 25 pages, a reprint from *St. Louis Courier of Medicine*.

STAINING BLOOD CORPUSCLES.—Double staining of nucleated blood corpuscles, as given by Dr. W. M. Gray, who is the successor of Dr. J. J. Woodward, of the Army Medical Museum: "Spread a thin layer of blood on a clean slide and dry; immerse the slide in a beaker of alum-carmine (Grenacher's formula) for five minutes; wash in clean water and immerse in a beaker of weak solution of sulph indigotate of soda or potash (the solution should be of a dark-blue color, not black-blue, as in a strong solution). After the slide has acquired a purplish hue wash in water and dry. After drying warm slightly and mount in balsam. The nuclei will be a beautiful red, and the protoplasm a greenish blue.—*Pharm. Era*.

MULHERON ON INTERMITTENT FEVER.—Professor Mulheron, the able editor of the *Medical Age*, gives in the September number of his excellent journal a good lecture on the homely topic of intermittent fever. He concludes a paragraph on cachexia with a good formula, which, contrary, to our custom, we give:

R.—Hydrarg. chloridi corrosivi..... gr. ij.
 Tr. ferri chloridi.....
 Acidi hydrochlorici diluti, ññ..... 3 iij.
 Liquoris acidi arseniosi..... 3 iss.
 Potassii chloridi..... 3 ss.
 Syrup simplicem, ad..... 3 vj.

M. Sig.—A teaspoonful in water four times a day. Note particularly in the above prescription that it is the *chloride*, and not the chlorate of potassium, that is prescribed.

HOW TO PALPATE THE ABDOMEN.—Let the patient take a deep respiration; and when he exhales, at once follow the abdomen firmly with palm of the hand.—*Medical Times*.

A NEW EDITION OF THE UNITED STATES DISPENSATORY.—J. B. Lippincott Company inform us that a New Edition of the United States Dispensatory is now being bound, and will be ready in a few days. The revision has been thorough, and not merely the addition of a supplement. More than one-third of the book, or nearly eight hundred pages, is entirely new matter, while the whole work has been most carefully rewritten. The National Formulary has been incorporated.

UNIVERSITY MEDICAL MAGAZINE.—This is a handsome monthly, edited under the auspices of the Alumni and Faculty of the University of Pennsylvania. Its outside cover is decorated with the head of Dr. John Morgan, the founder of the medical school of the old University. The contents of the initial number are by members of this venerated faculty, and places the journal in the front rank of medical literature. Doubtless the numerous alumni of the old University will flock as one man to its support. A. L. Hummell, Publisher, 224 So. 16th St., Philadelphia.

INLAND QUARANTINES FROM A PHILADELPHIA STAND-POINT.—The *Medical News* writes of the futility of inland quarantine with calm composure now, but had the case carried there from Jacksonville developed only a few cases in Philadelphia, we think the theory of that estimable journal would have been reversed. The transference of yellow fever from Florida to northern Alabama—Decatur—is a practical lesson in point. Philadelphia of Rush's day is not much like the present handsome city, and it is easy enough to see how present theories are made applicable only to changed surroundings. Yellow fever is not impossible even in Philadelphia, but however this may be, we don't want even one little spark in our Southern magazines, and while we doubtless do some very worthless and expensive things we call quarantine, we also, like wise men, have studied and computed our danger, based upon past calamitous experiences. We would not like our quarantine managed by Philadelphians who hold to the theory of the *News*, even though they wore the uniform of a government establishment.

DR. AGNEW, in an article entitled "Senile Hypertrophy of Prostate Gland," writes it as follows: "The advantages claimed for median prostatotomy with drainage [in senile hypertrophy of the prostate] are vesical rest and atrophy of the prostate body. It clears up every obscurity about the case. If an adenoma or a fibroma happens to be present it can be shelled out; if a stone is concealed in some pouch or recess of the bladder, it can be extracted and a great source of irritation at once removed. It offers the only hope of a cure of cystitis, or if not a cure, such relief as will make life comparatively comfortable. In four instances I have seen persons reduced almost to the door of death, not only relieved of distressing pain, but restored to fair health and usefulness by this operation. Two such cases are at present under my care, one of which promises to make a good recovery, and probably the other also, though sufficient time has not elapsed to speak with certainty. If such results can be obtained by the operation in extreme cases of hypertrophy with cystitis; how much more confidently may we expect to effect a radical cure, in the early stage of the disease before the cystitis has become entrenched in the bladder. The operation of prostatotomy does not differ, as far as the division of the structures is concerned, from that of median lithotomy. After the prostate is incised and the bladder opened, the viscus should be well washed out with a solution of boric acid, and a soft catheter of large calibre introduced and secured in place. The catheter ought not to be carried too far into the bladder for fear of infringing upon its posterior wall and thereby exciting pain and spasm. After the fourth day the instrument should be removed, and, if free from incrustation, cleansed and replaced. If roughened or in any way damaged, a new one will be required. Throughout the entire course of treatment the catheter must be removed and cleansed at least every third day. Once every day the bladder is to be washed out. The particular solution to be used can only be determined by finding out how this or that one consorts with the temper of the bladder. Generally it will be found that one of the following will answer every purpose: Boracic acid (grs. v—viii, water, \mathfrak{z} i), biborate of soda (grs. iii, water, \mathfrak{z} i), or hydrastis canadensis, glycerine and water (fluid extract of hydrastis, gtts. x—xx; glycerine, 3 ss; water, \mathfrak{z} ii— \mathfrak{z} iii). If phosphates form in the bladder, two or three grains of the acetate of lead to the ounce of water will act as a solvent.

A very weak solution of permanganate of potash may also be found beneficial. It is desirable to introduce into the bladder not more than three, or at most four ounces of any of the washes. The time usually required to keep up the drainage is from six to twelve weeks. After the perineal wound heals up around the catheter the patient may be allowed to sit up in a chair with a false bottom, through the opening of which the tube can lie, a vessel being placed beneath to receive the urine. The time to remove the drain-tube will be determined by the absence of deposit in the urine, or, when the operation is done before cystitis develops, by the atrophy of the prostate. After the removal of the tube it is more than probable that small fistulous orifice will remain for a long time, but the inconvenience resulting from the escape of a few drops of urine during micturition will prove of small importance; indeed, in two of my cases, the patients keep these small tracts open, introducing through them a very fine soft catheter, and occasionally washing out the bladder by this route, rather than by the urethra, a precaution which should be observed at intervals of every few days, in cases where cystitis has previously existed.—*University Med. Magazine.*

LEPROSY IN NEW ORLEANS.—Our admirable contemporary, the *New Orleans Medical and Surgical Journal*, is giving a series of papers on Leprosy in New Orleans, by Henry W. Blanc, M.D., Dermatologist to the Charity Hospital, etc., etc. It is illustrated with several portraits of cases. It is no doubt excellent clinical portraiture we are treated to, but so overwhelming is the thought that we are allowing terrible experiments to be performed in the United States with this dread disease, that we do not enjoy it as we might. We can look with compassion upon the striking pictures of this disease, but to know the reality that from several points in this country medical men are teaching the clinical aspects of leprosy from the actual subjects, it prompts all good sanitarians to raise their voices against this idle tampering with a dangerous foe. Because it does not, like small-pox, inflict the penalty of contagion in a given number of days, it will none the less certainly take root in our land if the cases now known to exist be not isolated.

SORE NIPPLES.—Compound tincture of benzoin is very efficacious in this troublesome malady. It should be applied after carefully washing off the nipples with warm water.—*Am. Med. Digest.*

DR. H. A. BEESON, Leesburg, O., writes: "I have been using Lactated Food in typhoid fever patients with the most satisfactory results, and for this purpose I prefer Lactated Food to any food I have ever used."

THE LACTIC ACID TREATMENT OF TUBERCULOUS LARYNGITIS.—Hering, of Warsaw, in a report read before the Sixtieth Meeting of German Naturalists, gave a list of 15 cases treated with lactic acid, in 11 of which complete cicatrization of the laryngeal ulcerations had resulted. Some of these cases had been over two years, and no recurrence had presented itself. Hering admits, however, that lactic acid cannot be used in all cases, being positively contra-indicated in some. He also used the sharp curette to clear the interarytenoid space of all tuberculous growths, and in deep tuberculous ulcerations. All cases presented the characteristic bacilli in their sputum.—*Rev. Mens. de Laryng.*

RICHARD ANTHONY PROCTOR, well known throughout the civilized world as an astronomer, died in New York City of yellow fever, September 12. The deceased was born in Chelsea, England, March 23, 1837, and at the age of seventeen became a clerk in a London bank, devoting his leisure time to the study of his favorite science, mathematics. Subsequently he attended King's College, London, and St. John's College, Cambridge, and graduated in 1860. Many of his essays and books are strictly scientific, more particularly the earlier ones, like "Double Stars" (1863), "Saturn and its System" (1865), "Gnomonic Star Atlas," and "Handbook of the Stars" (1866); but, in 1870, with his work on "Other Worlds than Ours; the plurality of worlds studied under the light of recent scientific researches," he entered the field of popular science, in which he has been one of the best known authors of popular astronomical works, and of contributions to magazine literature. Mr. Proctor visited the United States in 1873 on a lecture tour, and of late years had an observatory at Oak Lawn, Marion County, Florida, where he spent, with his family, a portion of last summer, arriving in New York September 10, on his way to England. The general fatigue of which he complained rapidly developed into yellow fever; on the night of September 11 he was removed from the Westminster hotel to the Willard Parker Hospital, where he died on the following day.—*American Journal of Pharmacy.*

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THOMAS F. WOOD, M. D.,
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ORIGINAL COMMUNICATIONS.

REPORT OF A CASE OF LAPAROTOMY FOR ACUTE INTESTINAL OBSTRUCTION.

By JOE HOWELL WAY, M.D., Waynesville, N. C.

(Read before the Medical Society of the State of North Carolina,
Fayetteville, May 8, 1888.)

On April 11th, at 12 o'clock, P. M., I was called to a house near the neighboring town of Clyde to meet in consultation Dr. H. N. Wells on the case of J. M., a farmer aged 31, of small slender build, and weighing only about 125 or 130 pounds, but a man who, as his neighbors expressed it, "thought himself very much of a man, and at the 'log-rollings' did twice as much as any other man of his size." On arriving I obtained from the Doctor the following history of his patients' illness: Early on the morning of the 10th, feeling about as well as usual, save some muscular soreness from having

been at work for a few days previous in erecting a barn, he shouldered a heavy bag of grain, and, putting it on his horse, mounted and rode to the mill little more than a mile distant. While on the way he felt a "little sick at his stomach," and experienced an uneasy sensation in his bowels, which continued to grow worse. Soon after reaching the mill he felt chilly, had considerable abdominal pain and vomited freely the contents of his stomach. Going home half an hour later, his sufferings had so increased that his physician was summoned. The patient was still vomiting matter of a bilious nature and suffering most acute pain, which ranged from the umbilicus down to the right inguinal region. The diagnosis made was "bilious colic with constipation," and morphine was given *per orem* for immediate relief, and several small doses of rhubarb and calomel were left to be taken during the day. These were all given, and during the night three compound cathartic pills and two ounces of castor oil were also administered. Enemata were also resorted to several times, and at first a small amount of fecal matter was passed, but later the fluid returned untinged, and, like the cathartics, was without avail.

On the morning of the 11th, when visited by his physician, his condition was much worse, and despite the free use of opiates *per orem*, he had been unable to procure the least degree of sleep or even momentary freedom from pain. His abdomen was very tympanitic, and marked tenderness existed almost over its entire surface. He was extremely thirsty, fecal vomiting took place occasionally, and he had no motion from his bowels. Copious enemata were again administered, but with results as before. The patient now observed a slight swelling in the right inguinal region extending down over the spermatic cord into the scrotum just above the testicle. The attention of his physician was directed to this, and though not fully able to satisfy himself that it was a hernial protrusion, he practiced the *taxis* for sometime with the result of almost entirely reducing the swelling. A temporary truss was improvised and applied and a messenger despatched to procure a truss. Morphine for the relief of the pain, which was very great, and the liberal use of the above mentioned cathartics, to which was added large doses of the sulphate of magnesia, was continued during the day, but no motion followed; the patient's sufferings increased, and his general condition grew worse.

At 12 P. M. on the 11th I visited him. His countenance was wan and wore a pinched expression suggestive of the intense suffering he had endured during the past two days. An unpleasant odor, as of fæces was noticed on entering the room, and on approaching the patient this was more strongly noticeable. This odor was caused by the exhalations of the patient's breath, which was very offensive from his having vomited fecal matters several times during the few preceding hours. His tongue was heavily coated, red at the tip and edges, and very tremulous when protruded. He was very thirsty and continually desiring water, which he drank with avidity. His pulse was 130, small and weak. His respirations were quickened and shallow; the condition of the abdomen giving rise to the most acute pain when efforts at deep inspiration were made. Singultus was present and had been for a few hours. The abdomen was greatly distended and tender over its entire surface, being markedly so at a point two inches above the right internal abdominal ring. Upon removing the truss, which did not fit very accurately, I observed a slight swelling running from the external ring down to a short distance above the right testicle. It was slightly tender and communicated a doughy sensation to the fingers when manipulated. No impulse on the patient's coughing was perceptible. Efforts to reduce the enlargement failed.

Arriving at the conclusion that we had to deal with a case of intestinal obstruction, I advised the bringing of the patient profoundly under the influence of morphia for a few hours, and in the event of failing to enable nature to relieve the obstruction, then an operation would be resorted to. Half a grain of morphia was given subcutaneously, and repeated twice at intervals of half an hour with the result of causing the patient to become more tranquil and sleep for a few hours. Returning to the patient several hours later, I found his general condition apparently much better, as the pain had been so slight that a repetition of the morphia had not been necessary. But the improvement, I was convinced, was only apparent, for the general symptoms indicated the beginning of a fatal collapse. Feeling certain that intestinal obstruction was present, but not being able to fully convince myself as to whether it existed alone at the abdominal rings or also at the site in the abdomen two inches above the internal ring, which was so acutely sensitive and painful, I advised an exploratory incision over the site of the

abdominal rings, intending, if necessary, to extend it upwards to the sensitive spot. This being agreed to, with the kindly assistance of Drs. Wells and Webb, I proceeded to operate. The patient was placed under the influence of chloroform and further efforts were made to reduce the tumor, but without success. The abdomen and pubes were thoroughly cleansed and the right pubic region shaved. Then, pinching up a fold of the integument, it was transfixed with the knife, and an incision three inches in length and directed upwards and outwards was made over the inguinal canal. The various coverings were then carefully gone through until the peritoneum was reached. This was opened and about three or four fluid drachms of dark grumous fluid with an offensive odor ran out. A fold of the omentum was found protruding from the external ring. It was of a dark purple color, and emitted an offensive odor. The fibres of the external ring were freely divided, the omentum was pulled down until healthy tissue was reached, a ligature was placed around this *en masse*, and the diseased portion removed. Examining the internal ring, I found its margins torn so that it was quite fatulous; but to my surprise the omental pedicle and a small loop of bowel which had come through the internal ring, but had not passed out the external ring, would not return to the abdominal cavity. On noting the intense degree of congestion the loop of intestine presented, and, finding no cause of constriction at the internal ring, I became fully convinced that the source of obstruction was to be found higher up in the abdominal cavity, and accordingly I then continued my incision upwards until the point which the patient had complained of as being so sensitive was reached. Now, by withdrawing the bowel partly with one hand and passing the index-finger of the other deeply into the abdominal cavity, I discovered the source of the obstruction to be a ligamentous band under which the intestine seemed to have passed and been unable to return. This was divided partly with a probe-pointed knife and partly by tearing it with my finger and the band released. The site of the operation was thoroughly irrigated with a hot carbolized solution, a rubber drainage-tube passed deep into the abdominal cavity, and the edges of the wound brought together by two sets of silk sutures, a superficial and a deep. An iodoform dressing was then applied. The patient reacted from the operation finely, and an hour afterwards his bowels began moving. Between fifteen and

twenty watery, feculent discharges took place in the next four hours, when it was deemed best to restrain further intestinal movements by hypodermatics of morphia. From this time on the patient's progress toward recovery was rapid. His temperature for one or two days only was above 101° F. His appetite was excellent all the time from the morning after the operation, though for some days I limited him to fluid nourishment. On the eighth day the drainage-tube and the stitches were removed.

IS THE FREQUENT USE OF FORCEPS ABUSIVE?

An Abstract from a Paper by THOMAS OPIE, M.D., Professor of Obstetrics and Gynæcology College of Physicians and Surgeons, Baltimore, Md.

(Read before the Association of American Obstetricians and Gynæcologists at their Annual Meeting, held September 17th, 18th and 19th, 1888, in Washington, D. C.)

There is a remarkable unanimity of opinion in the teaching of recent text-books, medical journals and medical societies on this subject.

They favor the more frequent use of forceps and condemn the so-called expectant management of labor. The axiom "Meddlesome Midwifery" has beaten a retreat before the clamor for the Forceps.

The name of Forceps points to its most striking characteristic, its prehensile power. Three distinct eras may be traced in this branch of medicine having their pivotal influence in the Forceps:

1st. The introduction of the original forces in 1700.

2d. The important invention by Levret of the pelvic curve in 1747; and

3d. When, in our own times, 1877, Tarnier invented the traction-rod attachments to the forceps.

Baudelocque arranged methodically the pelvic positions and presentations in 1791. Prior to that time the sovereign powers of the forceps were greatly abused. Their introduction was a matter of haphazard and convenience. Even in the days of Ramsbotham

there was a bitter controversy as to which was preferable, forceps or craniotomy.

A recent writer says "the forceps are simple in their construction, easy of application, wonderful in power."

The successive stages of their development have, on the contrary, made them far less simple in construction; they have a wider range of application and wonderful powers for life-destroying, as well as life-saving.

All surgical operations are dangerous; it is equally true that elements of danger lurk about all cases of artificial labor.

To substitute traction for contraction, to introduce and use instruments in the genital tract, indeed, to substitute art for nature's peculiar and inimitable methods is always dangerous.

The most unanswerable argument against frequent use of forceps comes from the gynæcologists. Good surgeons are relatively few and delicate, and dangerous operations in that branch are relegated to specialists among them, but most practitioners think themselves able to cope with any forceps case.

If skill in the use of forceps did not exist prior to Baudelocque's classification, how can we accord this virtue to operators with the forceps in these days, who are ignorant of the fundamental principles and admirable system upon which the present science of obstetrics rests.

The opportunities for the student of obstetrics is meagre, and granting he is thorough in the theory of this department, he forgets it before he is entrusted with a practice. No wonder, if he makes a medium rate obstetrician and sneers at the mechanism of labor.

To determine between the high forceps operation and version, to diagnose or rectify position above or at the brim, to apply the forceps accurately and conduct safely the little passenger through the passage way, are among the great achievements of medical science.

The high forceps operation is a critical one, and the operator should be chosen with as much care as for an ovariectomy.

The low operation is not so simple as to be left to "any tyro."

For practical purposes it answers to designate all kinds of forceps in the order of their seniority of invention, as follows: The straight (Chamberlyn), curved (Levret), and traction-rod (Tarnier).

It is high time to turn a deaf ear to the many names of individuals attached to forceps, because of various modifications of

lock, blades or handles. They obscure the horizon of the subject; they distract attention and confuse the object, which, like that of the practice of medicine in all its departments, is life-saving, cure.

There is but little need for straight forceps. The traction-rod forceps alone serve our purposes with satisfaction, at and above the superior strait.

The welding and unification of the traction-rod and curved forceps in Tarnier's latest style well nigh disarms criticism. It is a great achievement, one on which we may congratulate this age.

Think of the struggle and pity the sufferings of the man, woman and child as the operator toils away with the straight forceps at the inlet. The pelvic curve added, would only qualify, not remedy, the situation.

Still another modification and science has triumphed. The traction-rod, with relative ease and far less force, pilots the head through the upper narrows and thence into the safer region of the low operation.

If we could only persuade operators of the salvation of traction-rods covering all the indications for traction at the superior strait; of making traction during the pains, rythmical, direct, slow; of supplementing, not superseding, nature; of utilizing all the vis-à-tergo and only just enough of his power to bring the combined forces to the norm, and that all above that is abuse.

If we could get them to be careful, to halt, prospect and protect the sphincters of the uterus and vagina and to beware of rapidly unloading the organ, we would have a reform that would be as life-saving stations all along the passage way.

I am fully convinced of the ability of the forceps to help. I protest that they should not be used regardless of the factors of delay. I plead for their judicious use.

As to the indication that the os should always be dilated or dilatable, judgment often goes to protest.

About two years ago I was in attendance upon a most tedious, nervous and impatient primipara in whom the os was only three-quarters dilated; after a boisterous struggle of two nights and two days, slowly, almost imperceptibly, the dilatation increased. The patient's qualifications for abuse, however, grew more rapidly; I came in for a large share of it. She demanded chloroform and instrumental aid; the husband seconded her claim. The traction-

rod forceps were applied, and she was delivered in two hours under chloroform. A febrile trouble and tardy convalescence ensued; some months afterwards she became the patient of a clever gynecologist. His operation told the tale of the "Blundering Obstetrician." I have never had an opportunity since to call the patient to an account.

One of the most important requisites for a good obstetrician is to "know how to wait and do nothing." In the first stage he must wait a long time, especially in primiparæ, before using forceps; indeed he is not warranted in resorting to it, except the mother or child is in jeopardy.

Far the most frequent use of forceps is in the second stage, and we are told "any tyro" can perform this operation. Nature can generally do it better and safer, if not so quickly. Time and patience cannot be too much extolled as virtues during the whole of labor.

Let the attendant occupy the position of "watchful expectancy." Remove reflex disturbance, sustain by proper food, guard against fatigue, secure rest, assure and cheer, utilize the simpler methods of assistance, let nature do all she can, before we resort to forcible measures. I have lately limited the number of my forceps applications by manual pressure, according to the plan advised by Kristeller of Berlin.

This and other manual helps are more in accord with nature's laws and should be made use of. Instead of using forceps to curtail the sufferings of labor, we had better consider the very great efficacy of morphia, chloroform and chloral.

As an isolated indication it is doubtful whether pain ever warrants forceps' use, nor would such cases necessarily end with less suffering after immediate delivery.

It is a common occurrence for women to demand that the accoucheur shall do something to help the physiological phenomena of labor. Dr. Robert Barnes denounced this as an old and bad practice.

Anæsthesia is the best treatment for cases of excessive nervousness and emotionalism in labor; not the forceps, as has been advised. Chloroform during the pains often makes labor of this sort more normal.

The nervous element is often misleading; it is not always the

patient who is most noisy, who suffers most, nor is it safe to be influenced by her cries for more chloroform or the forceps.

The loss of time by an accoucheur is not to be accepted as a warrant for resorting to instrumental delivery. We fear in these times of go-ahead-iveness this is a common source of abuse.

The forceps is a life-saving instrument for both mother and child, whether we are dealing with the first or second stage of labor, provided they are used judiciously and skilfully.

There is much difficulty in obtaining exact statistics as to the frequency with which the forceps is used. The figures vary with the country and with the operator. Ploss' tables show a wide difference in frequency of application in German, Swiss and Russian maternities. In an aggregate of 333,054 labors the forceps was applied 1,975 times, or one in 30 applications.

Ploss' tables for England make the least number of applications for any operator, as one in 3,878. The operator with the greatest relative number was 1 in 78. Jacquemier's tables give 20,517 labors and 96 forceps cases, or 1 in 214.

These tables embrace a period from 1792 to 1862. Those were the days of the swaddling infancy of obstetric knowledge, when method was just inaugurated by Baudelocque.

Still they are useful in the light of history in setting forth the wide range of opinion as to the frequent use of the forceps in those days.

Galabin says no one would now recommend so sparingly a use of forceps as one in 200. He says that the statistics of St. Thomas' Lying-in Charity appear to show that a forceps rate of 1 in 16 to 1 in 18 deliveries does not endanger the mothers; but wider statistics are desired.

The Maternity Hospital, Philadelphia, shows the number of forceps applications in 1886 to have been about 1 in 8.

The Columbia Hospital, Washington, D. C., has had an average of about 1 in 20. At the Maryland Maternity Hospital, Baltimore, we have used forceps 142 times in 1495 deliveries, or 1 in 94.

The number of forceps applications at Vienna Lying-in-Asylum during the past year was 2 per cent.

In my private practice, including consultation work, the average has been 1 in 105. I have found by inquiry of many practitioners that their average in private practice ranges from 1 in 4 deliveries to 1 in 25.

It is to be deprecated that there is not a greater tendency to specialism in obstetrics. No man, ignorant of the mechanism of labor and who does not know the rules for using the forceps, should ever undertake a high forceps operation. That clumsy, untutored and unskilled hands do harm with the forceps, even at the lower strait, cannot be denied. As long as this unfitness and want of training for obstetric operations exists, it will be humane to withhold our advocacy of a still more frequent use of forceps.

Nature has been defined as the good will of God expressed in facts. We should crave her facts and imitate her. We will be adverse to substituting art for nature so long as man is inferior to his Maker, except we act because of danger to mother or child.

We will not detain you with the enumeration of the many accidents and injuries which befall the mother and child at the hands of the forceps. Suffice it to say they embrace a large part of every recent work on gynecology. We sadly need statistics to settle the wide differences among obstetric operators with the forceps as to the frequency with which they may be used. Our judgment is, that the average of 1 in 15 or 16 applications of forceps as suggested by Dr. Galabin is a fair one. The pendulum having properly left the position of too great infrequency has gone to an unwarranted extreme in point of frequency.

The obstetrician would do well to be found in the good company of the physician in the prevention of disease, the surgeon in his conservatism and in line with the modern sanitarian.

INTESTINAL TROUBLES OF INFANCY.

By L. G. BROUGHTON, M.D., Reidsville, N. C.

This article is not intended to put forth anything specially new, but intended simply to call attention to some facts which have been of great help to me in the treatment of these grave troubles, and with the hope that those who may not have used this plan may be induced to try it when again they are confronted with this terrible disease. In treating "summer complaint" of children we must not

lose sight of the fact that a distinction is to be made, for upon this distinction our treatment is either to be a success or a failure. There is an affection described by the authors as intestinal catarrh, ileo-colitis and entero-colitis, and with my limited experience I have not yet been able to separate them—to me they are one and the same trouble. I have studied this subject no little and I see no difference at all in these so-called troubles and that of dysentery in the adult. If we are called to treat a man who is prostrate on the bed with fever, frequent bloody discharges accompanied by pain and tenesmus, we at once conclude we have a case of dysentery and select our treatment accordingly. But when we are called to see a child suffering with the same symptoms, we conclude that we have something else and base our treatment accordingly. Now, I see no reason at all in such a theory. It confounds us in our study and very much interferes with our treatment. If I am called to see a child who is thus suffering, I conclude that I have before me a case of regular dysentery, and I proceed at once with the same kind of treatment that would be used in an adult, varying hardly at all. But my main object in writing this article was to discuss the trouble known as cholera-infantum. During this summer I have had very much experience in treating this disease, and I have given it a great deal of thought and study. Being disgusted with the old plan of treating it, and anxious to find something that would prove more satisfactory to myself and patients, I decided to try antiseptics and germicides. In my own mind I am well satisfied that we have in cholera-infantum a specific microbe which is generated within the gastro-intestinal tract as a result of decomposition and putrefaction. Most all authorities upon the subject, if it is so that we have any, agree that there is a specific microbe in cholera-infantum, but that it is taken in from a contaminated atmosphere. I admit that atmospheric surroundings and good hygiene have a great deal to do with any disease, but to admit that the one under consideration is of such a nature is not in accord with my experience in dealing with it. If we will take the pains we will find that in the beginning of all these cases we will find more or less indigestion, child-passing quantities of undigested matter. After awhile a diarrhœa is set up, which ultimately is developed into cholera-infantum, having all of its various symptoms. It is true that we rarely ever see a patient during this first period, and in many cases the family are not aware

that there has been any disturbance, and hence they describe to the doctor that the baby was suddenly taken with vomiting and loose bowels. During this period of indigestion we have decomposition set in, and during this and the putrefactive stage is when we have the germs and gases formed necessary to the production of cholera-infantum. To strengthen this idea we know that at least 4-5 of these cases are found in children who are bottle-fed. Now, why is it that the contaminated atmosphere should thus affect one class of cases more than another, for, as a general rule, these bottle fed children are strong and healthy. We know, too, that we may have, and do have, it in winter time, and we know this germ cannot live in the cold of winter. But we know that a child may be over-fed in winter as well as in summer. Now, I am aware that atmospheric influences have a vast deal to do with these troubles—the heat of summer, by its depressing effect upon the nerve-centers, thus interfering not only with the process of digestion, but also with the functions of the entire body. Also the heat of summer has a great influence upon the various foods that children are fed upon. But to say that in the atmosphere there exists a germ which is the source from which comes this grave disease, is a theory utterly devoid of reason and only is calculated to mystify and confound the student as he endeavors to get something of practical importance that can be used at the bedside. I believe, also, that the many brain lesions which are described by authors and so much looked for in these patients are only, as Dr. Waugh, in the *Philadelphia Med. Times*, July, 1888, page 614, says, “an intoxication of the blood is not the product of the diseased germs and not an invasion of the germs themselves, as many have claimed, for if it were not so, the local action of a germicide would not remove the trouble.” A very amusing contradictory statement is given by Goodhart (“Disease of Children”). On page 68 he says entero-colitis is caused by a specific microbe making its way into the gastro-intestinal tract, and that it prevails principally in cities and towns where there is more decomposition and putrefaction. Also, in describing the symptoms of entero-colitis, he places bloody discharges and tenesmus as being prominent. In speaking of cholera-infantum, page 74, he says that the causation is *identical* with that of entero-colitis. Now, I ask if the cause, as he says, is *identical*, why the distinction? I believe, to no little extent, in the theory of “like causes like effects,” and so,

if the causes are *identical*, the effects at least should show some resemblance, more than in these cases. I think we can simplify very much these affections. Since I have been practicing medicine I have only met with three grand divisions of infantile diarrhœa, simple diarrhœa, cholera-infantum and dysentery, and the many distinctions given only serve to throw around us a shadow as we endeavor to differentiate between them. If we will master these we will be much more successful than if we spend our days in trying to diagnosticate between the numbers of troubles spoken of by the works. Having satisfied ourselves that decomposition in the gastro-intestinal tract is the "*Fons origo et mali*," and that the atmospheric influences are only helpmates in the production we may very rationally conclude our treatment—first, clean out the bowels; second, arrest decomposition and putrefaction; third, restore healthy action in the alimentary tract; fourth, treat consecutive lesions.

To meet the first indication I have found nothing better than castor oil, provided the stomach can take it; if not, I use copious enemas of milk-warm water with the addition of some antiseptic. To meet the second there are a good number of remedies given, each having its special advocate. All agree, however, that if it is done it must be done by antiseptics and germicides. Salicylate of soda is a favorite with many, and I am very fond of it in many cases. I use it in connection with Parke, Davis & Co's Pepsin, each 3 grs. to a child two or three years old, given every two or three hours. Naphthalin, sælol, etc., have all their advocates. But the best results have been obtained by me in the use of the sulphocarbolate of zinc in doses of from 1-6 to 2 grs., with Parke, Davis & Co's Pepsin, 3 grs. every two hours to a child of from six months to two years. In looking over my notes I find I have treated some 15 or 20 cases with this drug, and am charmed with its effects in every case. I firmly believe we have in this drug almost a specific for such cases. I beg the indulgence of the reader just a while, while I give a report of some of the most striking cases treated with this remedy.

Case 1.—Little "Maud," aged 8 months, was taken in July, about the first, with nausea and vomiting. Soon afterwards her bowels began "running off," passing quantities of undigested milk. Dr. ——— was called and the usual remedies given, which proved ineffectual, and on the second week of her sickness I was called in

consultation. I found the child still nauseated considerably, temperature $102\frac{1}{2}$ in the morning and $103\frac{1}{2}$ in the evening, intense thirst, hot dry skin, head twisting from side to side, no attention paid to anything going on around the room, bowels moving every half hour during the day, character such as I have described before. I suggested a tepid water bath every two hours, stop food entirely for twelve hours, barley water to allay thirst, and the following every two hours :

R.—Zinci sulpho-carbolas..... gr. ii.

P., D. & Co's Pepsine..... gr. xxxvi.

℥. Ft. pulveres, No. 12.

Sig. one every 2 hours.

Next morning at 8 o'clock I called and found patient quiet, temperature 100, bowels moved four times during night, no nausea, crying for food. I directed a food of 2-3 rice-water, 1-3 condensed milk, sweetened to taste and cautioned not to give but ounce every three hours; also to continue powders as before. At 6 P. M. I saw patient again, found her still very hungry and crying all the time; bowels had moved only three times, character much better, temperature $101\frac{1}{2}$. I advised that she be given 2 oz. food every two hours, continue medicines as before; advised a teaspoonful wine whey every two or three hours. Next morning at 8 o'clock child still better; advised powders every four hours and food *ad libitum*.

Case 2.—A child aged 14 months had cholera-infantum two weeks when first I saw it; bowels considerably swollen, head symptoms very prominent, feet and legs swollen, motions from bowels very frequent, of a rice-water character, temperature 100, very great desire for food, very cross and peevish; I advised the same food as in Case 1, with the addition of some raw scraped beef occasionally. Directed her bowels should be washed out once a day with copious enemas of warm water, to which about 10 grs. salicylate soda was added; also the zinc and pepsin as in Case 1; also,

R.—Spts. nitre dul..... 3 iij.

Sodii bromidi

℥r. digitalis, āā..... 3 i.

℥. Sig. one teaspoonful every 3 or 4 hours.

I saw it again next morning, found bowels better, kidneys acting

nicely, child resting quietly, passed a good night, treatment continued. Next morning I called again, child still improved, powders continued, diuretic stopped. Called again next day, still better. I continued powders every four hours and gave

℞.—Liq. ferri nit..... gtt. xx.
 Tr. columba..... 3 iij.
 Syr. zing. qs. ad..... ̄ ii.

℥. Sig. one teaspoonful every 4 hours.

I heard from it several times after this, but saw it no more. Its recovery was permanent. I might mention several others, but it would only be consuming time, for they would only be a repetition of what I have said about those given. I believe that the action of the zinc is entirely local and that the germ is prevented from doing its constitutional work by the remedy acting locally upon the germs while in the stomach.

Now, so far as the trouble being more prevalent in cities and towns, it is true only in proportion to the bottle-feeding, etc., that is practiced by mothers in our cities and towns. Dr. Waugh, in his article on this subject, very strongly advocates sulpho-carbotate of zinc in typhoid fever as an antiseptic and germicide to which I can add my endorsement in three cases treated by me this summer.

LAPAROTOMY.*

By GEORGE S. LLOYD, M.D., of Tarborough, N. C.

(Read before the Medical Society of the State of North Carolina, at Fayetteville, May 8, 1888.)

Mr. President and Gentlemen of the Medical Society of the State of North Carolina:

After having heard several cases of Laparotomy on yesterday, I will assume the responsibility of reporting a successful case of ovariotomy performed by Dr. L. L. Staton, of Tarborough, assisted by Drs. Williams, Savage and myself.

Our patient, Mrs. T., aged 32, has been married seven years. The

disease began sometime before marriage, being of gradual development. Four years ago she was under the observation of one of Virginia's most eminent surgeons for four months, but after a careful examination and due consideration, owing to physical condition, he declined to operate.

Dr. Staton saw her in July, in consultation with Dr. Savage, her attending physician, and drew from her, by aspiration, more than a gallon of fluid, giving her some temporary relief. After giving her the advantage of a regular course of medicine to prevent the accumulation of the fluid, and proving of no avail, aspiration was resorted to the second time with the same result as before stated, and repeated to the thirteenth time. Dr. Staton stated to her that an operation was the only hope, and even then the chances for recovery were very small, owing to her physical condition; her abdomen was the size of a woman at full term, and her arm over the biceps muscle measured six inches in circumference; she was very much emaciated and anæmic.

Thereupon, on November 16th last, Dr. Staton proceeded to operate under thorough antisepsis, the bichloride solution being used, externally and internally, upon instruments, hands and dressing. Making an incision midway between the umbilicus and pubes in the median line $3\frac{1}{2}$ inches, the tumor soon came into view, but upon the slightest manipulation to the sorrow of the surgeon the tumor was ruptured and more than a gallon of sero-purulent fluid escaped into the abdominal cavity. The tumor, ovarian in character, with pedicle and appendages, weighed $3\frac{1}{2}$ pounds without the fluid. Twice she became pulseless, but by the hypodermic of whiskey she soon rallied. She reacted fairly well after the operation. She only experienced one bad day, on the fifth after the operation.

I was at her bedside six days during her convalescence, which was continued and satisfactory. I do not think she weighed over 70 pounds after the tumor was removed. She is now perfectly well, having gained 50 pounds.

*These notes were written from memory a few hours before reading. I hope Dr. S. will write the case more fully, as it is a very interesting one.

SELECTED PAPERS.

ACETPHENETIDIN, OR PHENACETIN.

By D. J. LEECH, M.D.

Phenacetin is a greyish crystalline powder without smell or taste, tolerably soluble in hot alcohol, but almost insoluble in water.

The favorable view taken by Hinsberg and Krast (*Centb. f. d. med. Wiss.*, February 26, 1887), with regard to the value of this drug as an antipyretic has been fully confirmed. They found that large doses given to the lower animals may lead to somnolence, an unsteady gait, vomiting and slight cyanosis, with the formation of methæmoglobin, but that recovery takes place even after the exhibition of considerable quantities of the drug. In man they said 3 to 7½ grains given to patients in a febrile state caused a gradual fall of temperature for four hours, without producing collapse or any other unpleasant after effect, such as cyanosis, sickness or very profuse perspiration. The rise of temperature succeeding to the fall was not accompanied by chills.—Kohler (*Wien. med. Woch.*, Vol. XXXVII, p. 865), confirmed these statements. (See *abst. Med. Chron.*, February, 1888).

Mays (*Med. News*, August 20, 1887) concluded that it was safer, though slower, in action than antipyrin or antifebrin.

Lepine (*Sem. med.*, December 21, 1887), found that cyanosis may follow the use of this drug, but that it has a less powerful influence on the blood than either antipyrin or antifebrin, and is, therefore, safer. In doses of 45 to 60 grains daily it neither affects the heart markedly nor causes cyanosis.

Hoppe (*Inaug. dissert. and Therap. Monat.* April, 1888) made experiments on himself and other healthy people with doses varying from 15 to 40 grains. No ill consequences followed their exhibition; a little chilliness and sleepiness, with heaviness of the eyelids and a sense of weariness, were usually the only symptoms which were noticed, and the temperature was but slightly depressed. After repeated large doses even these effects became less marked. Diuresis was observed in one or two cases, but could not be with certainty attributed to the drug.

Hoppe administered phenacetin to twenty patients suffering from febrile diseases. He found it act as powerfully as antipyrin and antifebrin, and thinks it produces less frequently unpleasant results. Tinnitus was noticed in once case, and an exanthem something like that caused by antipyrin in another, but these were the only unpleasant results, except that at times profuse perspiration occurred. He found that children bear the drug well, and came to the conclusion that one large dose of five to seven grains is more efficacious in febrile ailments than smaller doses often repeated. He states, moreover, that, like antipyrin and antifebrin it is a powerful anti-neuralgic and nerve sedative, relieving megrim, headache, sciatica, and many other similar ailments, when not dependent on deep-seated lesions. About 15 grains, he says, is required to relieve these pains. It produces little or no destructive effect on bacteria. Heusner (*Therap. Monat.*, March, 1888), thinks 15 grains of phenacetin is equivalent in its antipyretic power to $7\frac{1}{2}$ of antifebrin and 30 grains of antipyrin. He noticed in several cases chills and dryness of the throat after its administration, and in some cases nausea and slight dizziness. Only in one case (advanced phthisis) did it seem to produce symptoms of depression, but perspiration nearly always accompanied its antipyretic effect. He noticed after its administration slight somnolence. For weak persons he says doses of $7\frac{1}{2}$ grains suffice, but strong people bear well 15 grains twice daily. Heusner looks upon acetphenetidin as a more powerful antineuralgic and sedative than either antipyrin or antifebrin, but in trigeminal neuralgia he says it is less efficient than quinine. In sleeplessness and nervous excitement from overwork he found it very useful, the more so as no unpleasant effects followed its exhibition. Prof. v. Rumpf (*Berlin klin. Woch.*, No. 23, 1888), mentions it as of especial value in the pains of locomotor ataxia, which is not in accordance with the experience of some other observers.

Lindmann (*Therap. Monat.*, June, 1888) publishes a case in which 15 grains of phenacetin given for migraine in a woman of 34 caused giddiness, flashes of light, trembling of the limbs and nausea without giving relief. Ten hours after a second dose was taken, and caused an intense feeling of cold. Cyanosis likewise appeared, the skin was covered with cold sweat, and she suffered from dyspnoea. In a few hours these symptoms passed away, but a sense of exhaustion and slight irritation of the stomach lasted for sometime. In this case antipyrin taken previously had caused vomiting.

Professor Valentin, of Berne (*Therap. Monat.*, July, 1888), reports a case in which 8 grains of phenacetin given at night caused a feeling of heat in the face which prevented sleep. A week later 15 grains were given. The feeling of heat was more marked, and the body became covered with red spots. Professor Valentin describes these spots as very thickly distributed on the arms and legs, more sparingly on the body. They were of the size of a lentil, the raised centre being darker than the circumference. Some were quite flat, and all of them disappeared, on pressure with the finger. The exanthem passed off in a day, but loss of appetite and a sense of weariness remained.

Rohden (*Deutsch. med. Woch.*, No. 18, 1888) has employed phenacetin with the best results in scarlet fever and the measles, giving from 2 to 15 grains, according to age. In rheumatism, he thinks, it is more effective than salicylic acid, when 45 grains are given daily. He has used it as an antiseptic dusting powder, and thinks it promotes healing.

F. Muller (*Deutsch. med. Woch.*, No. 32, 1888) has used phenacetin to reduce temperature in typhus, erysipelas, phthisis and puerperal fever. Seven and a half to 12 grains, he says, cause a fall in one to four hours, which usually lasts three to five hours, and is not accompanied by any unpleasant feature except perspiration.

He failed to keep the temperature down completely by giving the drug continuously. Habituation occurred, and the dose had to be increased so largely as to become dangerous. In two cases cyanosis and methæmoglobinæmia occurred, but disappeared when the drug was discontinued. The natural course of fever is not influenced by the breaks in high temperature which the drug causes. He considers that phenacetin has an advantage over other antipyretics, in that its bye-effects are less marked; vomiting or stomach troubles are extremely rare, and he never observed tinnitus, exanthema, or signs of kidney irritation, which could be traced to the drug.

If more than 75 grains per day be not given, Muller thinks cyanosis and methæmoglobinuria will not occur.

In joint rheumatism he thinks the drug exerts a specific effect. Out of 24 cases treated with it, fever and swelling were relieved in from two to nine days in 15, though a little tension in some cases remained, which disappeared after a few doses of salicylic acid. In four cases only slight amendment took place, in six no improve-

ment occurred, but in two of these the ailment had a gonorrhœal, and in one a puerperal origin, whilst two others were chronic in character. Muller thinks relapses less common after phenacetin than after salicylic acid. Neither of these remedies seem to prevent the occurrence of endocarditis. Phenacetin is likewise useful in the relief of pain of various kinds, especially when neuralgic in character. It relieves pain, so Muller says, even in gynæcological and cardiac diseases, but it is of no value in those dependent on organic brain disease, locomotor ataxia and uræmia. The dose in neuralgia should be 15 to 60 grains daily. Phenacetin is absorbed unchanged, but in its passage through the system the acetyl group seems separated, so that phenetidin is found in the urine. But glycosuric acid and an ether-sulphuric combination of para-aminodiphenol is also found in the urine, and it is probable that a partial splitting up of the phenetidin itself occurs. After large doses a crystalline red coloring matter is also found in the urine. In some remarks on this paper Guttman confirmed the conclusions arrived at by Muller, whilst Katz claimed for the drug a curative influence in whooping-cough. In France, in addition to Lepine, Dujardin-Beaumetz (*Bull. et Mem. de la Soc. de Therap.*) has drawn attention to the therapeutic value of phenacetin, and at the meeting of the Medical Association in Glasgow, spoke highly of its utility, both in febrile and neuralgic ailments. Mesrachi and Rifat have published in the *Bull. gen. de Therap.*, June 15, 1888, a very full account of the drug, but owing to a misprint the formula for it is wrongly given. It is pointed out therein that phenacetin is soluble in a warm solution of lactic acid; hence the stomach secretion can dissolve it. The experiments of these observers on animals show that it is less toxic than antipyrin, and much less so than antifebrin. They find that in intermittents less perspiration follows phenacetin than the other antipyretics. In one case of pneumonia, antipyrin acted better than phenacetin. They think that the influence of the drug becomes less marked after successive administrations. To keep down the temperature in phthisis it is necessary to give about 4 grains every three hours. The continued administration of phenacetin, even for a month, causes no unpleasant symptoms. Mesrachi and Rifat never saw a single inconvenience arise from the administration of the drug in a large number of cases, in doses apparently of 6-9 grains, repeated at intervals of a few hours. In three

patients diminution of the urine flow was noted. On somewhat slight grounds they conclude that phenacetin is most useful as an anæsthetic in neuroses of gastric origin, but they say it also relieves pain connected with uterine and many other ailments. In migraine it seems inferior to antipyrin.

As an etherial solution seemed to cause, when applied to the hand, some loss of sensation, they applied the drug locally in a case of cancer of the tongue, and affirm that it distinctly relieved the pain. It seemed to be of service in acute laryngitis and diphtheria, and, like antipyrin, served to decrease the urine flow in nervous polyuria and diabetes.

Cesari and Burani (*Abst. Bull. gen. de Therap.*, June 15, 1888) affirm that phenacetin is excreted in the milk of nursing women, and several observers have pointed out that after the administration of the drug the urine will reduce alkaline copper sulphate.

Phenacetin is comparatively cheaper than antipyrin; it is readily given in powder, or suspended in water, and there can be no doubt it will rank high amongst antipyretics and nervine sedatives.—*Medical Chronicle*.

SURGERY OF THE BRAIN.

By JAMES NEVIN, M.D.

Weir and Seguin endeavor to lay down rules to regulate the question of operation in cerebral surgery. The medical diagnosis should, they think, be carefully worked out on not less than five lines of enquiry: (1) the diagnosis of tumor within the skull, and more especially in or upon the cerebral hemispheres; (2) the diagnosis of the exact location of the tumor; (3) the diagnosis of the depth of the tumor, whether it be cortical or subcortical; (4) the diagnosis of the solitude or multiplicity of the tumor; (5) the diagnosis of its nature.

(1) *The Diagnosis of Tumor of the Cerebrum*.—This is, as a rule, made accurate by the experienced physician. "The gradual development of symptoms, such as headache, convulsions, local or general, paresis and paralysis, co-extension of these symptoms, moderate anæsthesia, choked disk, hemianopsia, stupor, coma, slow

pulse, leave hardly any room for doubt." The grouping of these symptoms is most various.

(2) *The Diagnosis of the Topographical Location of the Tumor.*

(A) There are parts of the cerebrum, lesions of which produce no localizing symptoms. The general symptoms present are headache, diffused or localized; general convulsions; pressure symptoms, such as reluctant full pulse, perhaps slow pulse, choked disk, blindness, stupor, with or without partial hemiplegia, and hemianæsthesia, dysarthria, dysphagia, coma with hyper-pyrexia, and at the end Cheyne-Stokes respiration. The parts of the cerebrum which belong to this category are (a) the frontal lobes, strictly speaking, except the caudal extremities of its external gyri, more especially the second and third; (b) the apex and base of the temporal lobes on both sides, and the whole of the lobe on the right side; (c) the external and basal aspect of the occipital lobes; (d) parts of the parietal lobes; and (e) the central ganglia. (B) In two irregular divisions of the cerebrum, lesions give rise to special, definite, localizing symptoms; these are, first, the excitable or motor zone, cortex and attached fasciculi; and second, the known sensory zones, with their fasciculi. The motor zone comprises in its cortical aspect the following convolutions on both sides of the brain; the caudal extremities of the third, second, perhaps of the first frontal; the pre- and post-central gyri, and their prolongation within the longitudinal fissure, known as the paracentral lobule. These parts can be accurately mapped out on the head. It scarcely seems necessary to recapitulate here the functions of the lobule. We have from below upwards the centres for speech, for lingual, manual, brachial, scapular, abdominal, femoral, crural and pedal movements. "A centre for ocular movements doubtless exists, but it has not yet been determined; it is quite certainly not in the second frontal gyrus, as claimed by Ferrier and Horsley." "The entire motor zone is easily reached by trephining, the only obstacle in the way being the middle meningeal artery, and, in operations near the vertex, the superior longitudinal sinus." "Of the sensory zone we have as yet positive knowledge of only two of its centres or areas, a probable knowledge of a third, and a suspicion of a fourth. On the left side of the cerebrum the first or dorsal temporal gyrus appears to be the organ for vocal or linguistic audition. Upon the inner mesial aspect of each occipital lobe is a triangular gyrus, which has a wonderful function; each

cuneus receiving impressions, probably through direct fibres, from the homologous half of each retina on the median line. The third division or area of which we have knowledge, a preliminary knowledge only, is an uncertain portion of the parietal lobe, probably the inferior parietal lobule, on both sides. This area, we have some reason to believe, receives and registers impressions of muscular sense or motor residua."

I.—TUMORS OF THE MOTOR ZONE.

(a) "Tumors of the caudal extremities of the third frontal gyrus (left side) produce at first slowness of speech and paroxysmal motor zone causes paresis and convulsive movements of the tongue, face and upper extremity on the opposite side. Later still these symptoms, motor aphasia, spasmodic movements and paralysis of the tongue, face and upper extremity, become more frequent, and finally, permanent; with occasional spasms."

(b) "Tumors of the basal ends of the pre- and post-central gyri cause at first convulsive movements, or paresis, or both, of the opposite half of the tongue; later, paroxysmal motor aphasia, spasm and paresis of the face and upper extremity; last, complete paralysis of one-half of the tongue, of the face and upper extremity, and permanent aphasia, with occasional convulsions."

(c) "Tumors of the caudal extremity produce at first paresis with convulsive movements of the facial muscles of the opposite side; later, the same symptoms, with the addition of more or less motor aphasia, paresis of one-half of the tongue, paresis and spasm of the upper limb (more especially the fingers); lastly, permanent paralysis of the face, half the tongue and hand, permanent aphasia and occasional spasms."

(d) "A tumor starting in the lower middle third of the pre-central gyrus first reveals itself by spasm and paresis of the opposite thumb and finger. After further growth the irritative and destructive symptoms appear in the face and tongue, and more or less marked aphasia occurs; the paresis of the hand and forearm becoming complete paralysis. A peculiarity of lesion of this centre, not as yet proved to exist in lesion of the other centres of the motor zone, is a pronounced subjective numbness and slight, though usually demonstrable, tactile anæsthesia."

(e) "Tumors of the upper middle third, or top of the pre-central gyrus (and perhaps of the post-central also) early cause symptoms in the muscular apparatus of the upper arm and shoulder. Later the spasm and paresis extend to other parts, according as the growth extends ventrad or dorsad. In the former case, the forearm and hand, the face, half of the tongue, show symptoms; and lastly, aphasia may occur, though rarely complete. If the tumor grow dorsad toward the longitudinal fissure, spasm and paresis, later paralysis, show themselves successively in the thigh, leg and foot."

(f) "Tumors of the upper third, or top of the pre- and post-central gyri, and of the paracentral lobule, at first cause symptoms, convulsive and paretic, in the thigh, leg or foot. There is every reason to believe that in man the special sub-centre for the hip and thigh is the cortex of the central gyri, where they bend over to form the paracentral lobule, while the lobule itself innervates the leg and toes. Later, by extension of the morbid growth, there are symptoms in the arm and hand, rarely in the face, probably never aphasia (except in the rare cases where a peculiar vitality of the patient permits of the growth of a colossal tumor)."

The authors lay great stress on the early limited spasm or paresis, as the key to a correct localization diagnosis. They propose to call this the Signal symptom of cerebral tumor, and they regard it as of the first importance to sift the early history of the disease, with, if possible, an eye-witness, so as to determine accurately the earliest phenomena.

II.—TUMORS OF THE SENSORY ZONE.

(a) "A patient presenting, besides the general symptoms of an intracranial growth, such a specific symptom as verbal deafness—deafness to speech—without marked hemiplegia, hemispasm, or hemi-anæsthesia, probably has a tumor involving the left superior or dorsal temporal gyrus, or its adjacent white fasciculus. The symptoms produced by extension of this growth would be mostly sensory, such as paræsthesiæ, loss of muscular senses, and, later, anæsthesia of parts on the opposite side of the body."

(b) "A patient who has headache, vomiting, choked disk, dulness tending to stupor, increasing hemia-anæsthesia, with lateral hemianopsia—dark half fields on the same side as anæsthesia—without

hemispasm or hemiplegia, quite certainly has a tumor in the white substance of the occipital lobe."

(c) "If, with the above-named general symptoms of cerebral tumor, we find lateral hemianopsia almost alone as a localizing symptom, i. e., without hemispasm, hemiplegia and hemi-anæsthesia, there is almost certainly a tumor on the inner or mesial aspect of the occipital lobe, opposite to the dark half-fields, compressing and destroying the cuneus. The symptoms to be expected from the extension of such a tumor are: from its growth upward, weakness and even paralysis of the lower extremity of the same side as the dark half-fields; and from its downward growth, symptoms of injury to the cerebellum and optic lobes. That such a diagnostic statement is not fanciful, may be proved by the findings in the first tumor case operated on by Dr. Weir in the spring of last year. The location of this tumor upon the cuneus, or near it, had been diagnosed sixteen months before the operation. Indeed, I am prepared to assert that tumors involving the cuneus, or its subjacent fasciculus, together with other fibres of the caudal division of the internal capsule, are now as easy of correct diagnosis as are tumors of the various motor centres."

(3) *The Diagnosis of the Depth of the Tumor.*—This is discussed by the authors from various points of view, but I shall content myself with saying that from none of these do any clear means of differentiating cortical from sub-cortical tumors present themselves. Nevertheless in favor of a strictly cortical or epicortical lesion are these symptoms, none of them having specific or independent value. Localized clonic spasm, epileptic attacks beginning by local spasm, followed by paralysis; early appearance of local cranial pain and tenderness; increased local cranial temperature. In favor of sub-cortical location of a tumor: local or hemiparesis, followed by spasm; predominance of tonic spasm: absence, small degree, or very late appearance of local headache, and of tenderness to percussion; normal cranial temperature.

(4) *The Diagnosis of the Tumor being Solitary.*—Can we diagnose multiple cerebral tumors? To this question a qualified affirmative may be given. When the symptoms point to the involvement of centres at some distance from each other, not much difficulty should be experienced. But where the multiple tumors are close together the diagnosis is much more obscure; but the possibility of

overlooking a contiguous small tumor should not, in the author's opinion, prevent operation.

(5) *The Diagnosis of the Nature of the Tumor.*—This may be arrived at partly from the presence of lesions elsewhere, as tuberculosis in the lungs and cancer in various seats, and partly from a study of statistics. Where there is strong reason for believing the tumor to be tubercular or cancerous in connection with deposits elsewhere, in the author's opinion operation should be avoided. He is by no means in accord with Hale White and von Bergmann when they condemn the removal of gummatous tumors. This paper, of which I have given a somewhat long abstract, may be profitably read in connection with Dr. Macewen's.

Of Dr. Macewen's splendid record of successful achievements it is needless to give an epitome, since it is to be found in the *British Medical Journal* and *Lancet*, and in such a condensed form that to abstract would be to spoil. Still, it is impossible to omit all allusion to a contribution to surgery of this magnitude. Dr. Macewen's cases comprise eleven operations for cerebral disease, and six for pressure on the spinal cord. Of the former all recovered but one, which, at the time of operation, was in extremis, a large abscess having destroyed the whole of one temporo-sphenoidal lobe. Of 21 cerebral cases—exclusive of fracture of the skull with brain lesions or other immediate effect of injury—all but three recovered, and these such that death could by no possibility be assigned to the operation. Of the spinal cases four recovered.

These cases give to Dr. Macewen unquestionably the first place in this department of surgery, both in point of time and in the value of his work. They comprise not only that class of patient in whom the symptoms correspond to well-defined motor centres, but those in which diagnosis required originality and much analytical skill, as, for example, Case 3, in 1879, where from mental hebetude and subsequent development of motor symptoms, the tumor was localized in the frontal lobes; and Case 11, in which, undeceived by somewhat puzzling psychical symptoms, and by a depression in the skull not at the seat of injury, Dr. Macewen, guided by the early history of blindness, localized the injury as affecting the angular gyrus. That such astonishing results have been possible, is due to the concurrence of tanisepsis with the immense clinical and physiological advances made in the knowledge of the brain since 1866.—*Med. Chronicle.*

THE TREATMENT OF CARCINOMA OF THE BREAST.

By SAMUEL W. GROSS, M.D.

Of operations which do not rank with major procedures, not one is more commonly practised by men not skilled in the manual of surgery than that of the removal of the mammary gland for carcinoma. The superficial situation of the organ, the ease with which hemorrhage is controlled, the flaps are united, and the dressings applied, all tend to make partial or complete extirpation of the breast a tempting field for the young surgeon. If to these considerations be added the great frequency of the disease, it will be seen that its treatment should constitute an instructive topic for consideration and discussion by this body.

In accepting your invitation, Mr. President, to make the opening remarks upon the subject, I take it that a brief narration of my own personal experience will prove to be more interesting than were I to deal with the practice of others, the more especially as the operation which I have performed is more thorough than the usual procedure.

At the outset I will state that in the management of so lethal an affection I have relied upon the scalpel, as I believe it to be the one and only measure which is capable of affording good results. It may be that some of my hearers are sceptical as to the propriety of interference. The old tradition that carcinoma is an outward evidence of a blood disorder, and that it cannot, consequently, be procured by operation, may still influence a few of our members. To these I may be permitted to say, first, that the leading minds of the world now admit that carcinoma is primarily a local growth; and, secondly, as I have elsewhere conclusively shown, from an impartial examination of a large number of cases that the knife not only prevents the local dissemination of the disease, its extension to the lymphatic glands, and the occurrence of secondary growths in a large percentage of cases, but that it moreover prolongs life and definitely cures one patient out of every eight and a half.

An operation in a suitable case having been decided upon, the one selected by the majority of surgeons is that with which we are all so familiar, namely, the inclusion of the nipple and a portion of the skin in two elliptical incisions, the reflection of the flaps and the dissection of the glands from the surrounding tissues. Other surgeons,

actuated by the desire to save as much of the gland as possible, limit their efforts to the extirpation of the tumor alone. The first of these procedures is faulty enough; the latter cannot be condemned in too severe terms; and yet, in his recent monograph on "The Operative Surgery of Malignant Disease," Butlin, I am sorry to say, recommends it. A knowledge of the changes which, starting from the tumor itself, ensue in the remainder of the breast, in the adjacent soft tissues and in the associated lymphatic glands, which changes indicate the local extension of the disease along the lymph paths, ought surely to lead the surgeon to reject such irrational operations. In very exceptional instances a cure may be effected; but we all know what is the common result—a more or less rapid recurrence of the disease—a favorable issue being so uncommon after these incomplete operations that few, if any, of us have ever witnessed it.

Dissatisfaction with my own earlier results and those which I was enabled to follow in the practice of other surgeons led me, ten years ago, to adopt a radical procedure, the object being to effect riddance of all the tissues in which the experience of hundreds of years demonstrates that recurrence, or a new outbreak of the disease, takes place. Hence, in my operation, which is minutely described in the *American Journal of the Medical Sciences* for April, 1888, I amputate, by a circular cut, the entire breast with its overlying skin and fat, dissect off the pectoral, fascia, and carry an incision into the axilla, through which I am enabled to extirpate its contents. If nodules should be found in the pectoral or intercostal muscles, they are also removed with an equally unsparing hand. The edges of the wounds are then approximated, the closure of the breast incision being greatly facilitated by raising the flaps from the subjacent tissues for an inch and a half to two inches, and the employment of button sutures. In some cases the wound cannot be entirely united, so that it has to heal by the process of granulation.

In the discussion which will follow the reading of my paper I will doubtless be asked, first, Why do you remove the entire breast and its surrounding tissues? and, secondly, Why do you attack the axilla in all cases? My answer is, simply because recurrence, or a new outbreak of the disease, ensues in tissues which are left behind in the less radical modes of operating. The accumulated observations of surgeons show that recurrence may be anticipated in the skin and subcutaneous tissues, especially at or near the cicatrice; in the fascia

covering the pectoral muscle; in the remnant of the breast from which the tumor alone was excised; in outlying lobules which were overlooked during the performance of the less complete operations, and in the lymphatic glands, particularly those of the axilla.

Answering these questions more fully, I would say that sound pathology, as well as experience, demands that the entire mammary gland, along with its circumjacent tissues, should be amputated, first, because we have to deal with a carcinomatous degeneration commencing at one point, from which the cells migrate in various directions into the remainder of the breast and the surrounding tissues, the extent of which migration into the lymphatics and their radicles it is impossible to determine with the naked eye; secondly, because the disease is sometimes multiple, and the smaller growths are only detected on examining the breast after its removal; thirdly, because minute lobules frequently lie at some distance from the main body of the gland, particularly toward the axilla and the clavicle, which may subsequently become the seat of a new outbreak, even as late as ten years, as in a remarkable instance recorded by Banks; and fourthly, because nodules may be found in the subcutaneous tissues at a relatively great distance from the breast, which would certainly have escaped detection in the lesser operations.

My answer to the second question, Why do you attack the axilla in every case? is because the axillary glands are almost always diseased, even though they cannot be felt prior to operation. Of my 45 cases, the glands were not palpable in 18, but in 15 of these they were present when the axillary space was opened. In 57 out of 65 similar cases, Kuester found that the glands were infected, so that our combined experience demonstrates that the glands are invaded in 86 out of every 100 cases in which there is no external evidence of the implication. Hence, if the axilla be not evacuated of its contents in every case, a subsequent operation will almost surely be demanded. In point of fact, I consider this step as the keynote of the procedure, and I refuse to operate if I am not permitted to have my own way in this regard.

Although the procedure which I have described may appear to be unnecessarily severe as to the sacrifice to tissue, and, at first sight, seem to be attended with more risk than operations performed with a more sparing hand, I have still to present some facts which con-

clusively show that it is the best that has as yet been practised as regards mortality, freedom from local recurrence and a final cure.

Of my 45 cases, 2, or 4.44 per cent., perished from the operation, and 5 patients were lost sight of after recovery. Deducting the 7 that died and could not be traced, 38 cases show local recurrence in 11, or 28.95 per cent. Including the deaths, out of 40 cases, 9, or 22.5 per cent., recovered. Of these, 1 died of an intercurrent disease in 7 years and 10 months, while the remainder are still doing well, 1 for 9 years and 1 month, 1 for 6 years and 9 months, 1 for 4 years and 3 months, 1 for 3 years and 11 months, 2 for three years and 6 months, and 1 for 3 years and 5 days. •

Let us contrast these results with those afforded by the next best operation, namely, the removal of the breast by flaps and the evacuation of the contents of the axilla in every case. Of 328 cases of this description in the hands of Banks, Kuester and von Bergmann, 10.67 per cent. perished, there was local recurrence in 54.92 per cent., and 15.15 per cent. were cured, so that my operation is safer by 6.23 per cent., is less liable to local recurrence by 25.97 per cent., and affords 7.35 per cent. more of permanent recoveries.

It is quite certain that the greater immunity from local reproduction of the disease in my operation is due to the total amputation of the breast, its skin and enveloping fat. Despite the fact that my results are better than any that have heretofore been recorded, a careful examination of the cases of Banks shows that he met with only 3.88 per cent. more of recurrences than I have, and that his percentage of recoveries, namely, 20.77, is only 1.73 per cent. less than my own. Hence, I felt that I might possibly have sacrificed too much of the skin; and, since June, 1887, I have so far modified my operation in 10 cases, the skin in none being apparently affected, as to save enough of that structure to admit of nice approximation of the edges of the wound. All recovered from the operation; one died from recurrence in the axilla and metastasis; one is living with axillary reproduction; in not one has there been local reproduction; one patient is free from disease at the end of fifteen months; one for one year; one for nine months; and the remainder for periods varying between three and eight months. These cases can be followed, and whenever I am sure of being able to trace my patients, I shall give this procedure a fair trial. When, on the other hand, the patient lives at a great distance, or her circumstances are such

as to prevent her visiting me in the event of recurrence, I will adhere to the more extensive operation.—*Maryland Med. Journal, from Proceedings of Philadelphia County Medical Society.*

TREATMENT OF MALARIAL HAMÆGLOBINURIA.

Abstract of an Article in *Therapeutic Gazette*, by JNO. A. STAMPS, M.D., Wallaceburg, Ark.

* * * * *

Now, in coming to the treatment of this disease, it is my opinion that the method of administering remedies figures largely in the successful management of the case, and, owing to the rapidity of absorption and appearance of the constitutional effects of available substances by the hypodermic method, I consider it vastly superior to any other method, for in experiments the following results have been invariably obtained: First, absorption in subcutaneous injection generally proceeds with great rapidity and energy; and, secondly, when the same substances are administered by the mouth (in perfectly healthy subjects), it is only after fifteen or twenty minutes that an accumulation of the drugs takes place equal to that which happens in three or four minutes in the subcutaneous mode of administration.

It is a well-known fact that a sufferer from this disease, and especially during that period when nausea and vomiting are incessant, is very poorly capacitated to retain the remedial agents administered *per orem*; and, furthermore, if capable of retaining the medicines so given, the stomach is in such a condition that it partially or wholly fails to act upon and assimilate anything that is introduced into it.

A very striking illustration of this latter difficulty occurred in the practice of my friend, Dr. McCaskill. "Being called to a case of hæmaglobinuria, he ordered quinine to be given at frequent intervals, and at his next visit found, to his astonishment, that the entire amount (nine doses) had passed from the patient without the slightest change towards absorption."

Bearing in mind the different indications for treatment, it is very

necessary to meet those indications with the most appropriate remedies at our command, and antagonize, as far as in our power, the destructive influences of the disease.

In adopting this, quinine, which in ordinary fevers acts like a Samson, is not only inadmissible, but absolutely interdicted. Why is this the case? As has already been stated, the renal arteries are contracted, and the circulation through them dammed up by the over-full *venæ efferentiæ*.

The blood is surcharged with the corpuscular detritus, and urea and uric acid, which are eliminated by them, is greatly increased. Now, what are the effects of quinine upon the renal circulation and the increase or diminution of waste products?

In man, large doses of quinine lower the force and frequency of the pulse, enfeebling and depressing the cardiac motor-ganglia; and, as a result of this action, the supply of blood to the kidneys is lessened, and, at the same time, the waste products are greatly increased: first, by preventing their elimination, in consequence of its injurious action upon the kidneys; and, secondly, by directly augmenting and stimulating their production, thus aggravating and increasing the very evils and abnormal conditions it is given to control and rectify.

At this critical juncture, where the patient's life is suspended by a thread, as it were, and uremic toxæmia is rapidly developing, we must look to some other agent for relief, whose effects upon the nervous and circulatory systems are the reverse and opposite of those of quinine, and no agent is so likely to meet the indications as atropine hypodermically administered. Instead of depressing, it tones up and sustains the heart's action. Instead of enfeebling and paralyzing the vaso-motor nerves and stimulating their antagonists, the inhibiting centres, it encourages and promotes a fuller and freer flow of blood into all the vessels and organs. Instead of augmenting the waste products, and at the same time arresting their elimination, it stimulates and increases their elimination by virtue of its inviting a greater than normal transmission of blood through all the organs and tissues. According to Bartholow, its effects upon the sympathetic system, on the heart, and upon the temperature are directly the opposite and antagonistic of those of quinine. Therapeutically, it meets exactly the indications presented by the patient,

and clinically, as long as there is hope for relief, it will delude and disappoint us.

Another, and, in my opinion, a valuable agent is strychnine. "It exalts the reflex functions of the cord, and is, therefore, properly, the antagonist of those conditions of disease in which this function is weakened. It also energizes the heart and raises arterial tension by stimulating the vaso-motor system, opposing all actions from disease of a contrary kind."

It is, further, a powerful stimulant of the respiratory function, and is, therefore, the antagonist of those symptoms indicating respiratory depression. The so-called reflex paralyses are clearly antagonized by strychnine, and they are especially benefited by its administration. It is probable that reflex paralyses are often due to anæmia of the motor-centres, which cease to act because the amount of blood normal to the part is no longer received by it. That strychnine produces rather a hyperæmic state of the cord and motor-centres generally, while it also stimulates them to greater activity, can hardly be denied (Bartholow).

In conjunction with the above, the eliminating organs should be excited to their utmost depurative activity by purgatives, diuretics and diaphoretics; and, of all purgatives, calomel is, in my opinion, the most reliable. It owes its chief value to its tendency to act on the liver, the secretory function of which it stimulates, and is peculiarly useful in all affections attended with congestion of the portal system, or torpidity of the hepatic function. The difficulty with which it is thrown from the stomach renders it highly useful in some cases of obstinate vomiting, when other remedies are rejected. It is useless to go into the details of diuretics and diaphoretics, as we have an abundance of useful preparations, and can select them to meet the demands of each individual.

The remainder of the treatment is entirely symptomatic, and, with proper skill and judgment, it is my opinion that the mortality of this disease can be very materially lessened.—*The Therapeutic Gazette*.

MR. TAIT claims that the uterine appendages have as little to do with the sexual appetite of a woman as her front teeth.—*Maryland Medical Journal*.

THE PRINCIPLES OF THE TREATMENT OF CHRONIC ECZEMA.

Jarisch gives us an attractive title, for who would not rather have some principles on which to act in the management of this common and troublesome affection rather than the simple addition of new formulæ to old?

He truly says that there is no such thing as a specific local treatment of eczema.

It must be remembered that the irritability of the skin is not only different in different cases, but also various in the same cases case at one time or another. This gives us our principle in treatment, namely, the greater the irritability the more perfectly "indifferent" the local application. In addition, cases should be under frequent observation.

The means ordinarily employed in the local treatment of eczema are divided by Lassar into three different classes: (1) Dry and protective, "indifferent" applications. (2) Softening and macerating applications. (3) Applications having the effect of diminishing hyperæmia and aiding cornification.

In the first category we include dusting powders, and particularly Lassar's paste, which is composed as follows: *R.* Pulv. acidi salicylici, gr. x-xx; pulv. amyli, pulv. zinci oxidi, ãã gr. c; vaselini, gr. cc.—*M.* This paste may be spread with the hand over the affected part, which is then to be powdered. This paste is peculiarly useful in acute eczema, but may also be employed in the chronic stages of the disease. In cases of papular eczema, where macerating remedies produce an increase in severity and also a spread of the eruption, this application is of use. The simple dry powders of starch, oxide of zinc, etc., also claim a place here.

To come to the second category, that of softening and macerating materials, we have water, most ointments, salve-soaps, soaps, plasters and plaster mulls. The indication for the employment of these remedies is found in the accumulation of the products of disease on the skin and in its excessive dryness.

Among the members of this class which may cause irritation we must include soap and impermeable dressings, which therefore can only be used in cases where there need be no fear lest we should

arouse fresh eruption. Among the milder remedies of this class are the ointments, which rarely excite irritation. Why one of these should be used rather than another; why in one case we use diachylon, in another borax, zinc, salicylated ointments, etc., we cannot say. Jarisch thinks the main point in every instance is the same, namely, the maceration of the skin. He thinks that ointments with a high melting-point like diachylon macerate better than those of low melting-point like vaseline, and are therefore preferable.

When ointments do not seem to agree, Jarisch recommends having recourse to Unna's plaster mulls (easier to talk about than to get in this country), or Pick's salicylic soap-plaster, of which Jarisch does not give us the formula.

To the third class of applications belongs tar—a valuable remedy, but one not to be used for the first time without precaution. Its chief use is found in squamous conditions.

A fourth category may be added to the first three—that of anti-pruritics. Jarisch has not much to say about these, but recommends alcohol and carbolic acid solutions.—*Cbl. f. Gesammt. Therap.*

THE HEREDITY OF CANCER.—Dr. Jos. Le Raux (*l'Union Med. du Canada*) gives the following notes: I saw sometime ago that a very worthy New York physician has doubted the heredity of cancer. The assertion caused me some surprise, and seemed to me to merit consideration by reason of the authority which he has formulated; therefore permit me to relate here a series of facts which seem to give proof of the heredity of cancer.

In 1775 was born A**, a daughter, who married towards 1795, and in 1804 had a son, B**, who married in his turn in 1832, and had a son, C**, who married also, in 1860, had a son, D*, to-day aged 28 years.

The woman A** died at the age of 64 of a cancer of the tongue. His son B** succumbed at 66 years of epithelioma of the left eye. C** is still living and enjoys apparently excellent health, while his son D** died at 28 with cancer of the rectum.


In this series of four generations C** is the only one who escaped the hereditary vice, and who can say he will still escape? The generations cited were persons in easy circumstances, and there was no alcoholic, tuberculous or syphilitic antecedents.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

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THOMAS F. WOOD, M. D., Wilmington, N. C.,
GEO. GILLET T THOMAS, M. D., “ } Editors.

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A LESSON IN SANITATION.

It is certainly a safe assertion that the city of Wilmington has enjoyed several months of unusual health, and it is a just cause of congratulation and thankfulness that this delightful condition has evidently been largely, if not entirely, the result of the cleansing stimulated by the threatened invasion of yellow fever. As far as we can judge from the tables of the Signal Service here, there has been no unusual atmospheric surroundings to bring about the result that we claim for the efficient work of the health officers and their corps of laborers.

It is beyond dispute that the streets have been cleaner than ever before in many years, and that the belated doctor did not have his nose assaulted with the odors of uncared-for privies, which have so long made the damp air of night disagreeable and noxious. Back lots have been emptied of unwholesome accumulations, and alleys where the sun was too often a short visitor, were purged of their filthy soil-coverings and put in good order. Streets were kept clear, or nearly so, of unsightly piles of trash, and less dependence was placed upon the good offices of the thirsty soil to take up the deposits that have heretofore been neglected, instead of being hauled away and burnt, as they have been this season.

The death-rate has been lowered remarkably and the sickness less than any of our physicians here could have expected. There is a valuable lesson to town authorities everywhere in the State in this happy condition of things, and the hope is fostered that it will not be lost here. The public will, we feel sure, learn that a confiding and helpful assistance to the efforts of the health authorities is always to be met by the best efforts of these officials to prevent disaster, that is too dire, very often, to be cured, if allowed to find an abiding place in a community. Let the winter months, now almost upon us, be marked by the same care for the whole town on the part of the authorities, and with the advent of the hot months there will come the feeling of safety that our experience during the past summer justifies. The health officers everywhere within the bounds of the authority of the State Board, may, we think, study with profit the reports from New Hanover county as set forth in the *Bulletin*, and take comfort in the fact that a clean town brings health and prosperity, at a slight expense to the public treasury, and to the loss of the doctors and druggists. We have known of the determined and persistent work done by all of this city's sanitary workers, and it is nothing more than right to expect that there shall be no slackening of the labor to preserve the state of things that grew out of fear and should be continued in thankfulness.

It is clear that towns can be kept clean and healthy as far as preventable diseases are concerned, and it is the right and province of the tax-payer to claim it shall be done.

REVIEWS AND BOOK NOTICES.

HAND-BOOK OF HISTORICAL AND GEOGRAPHICAL PHTHISIOLOGY, with Special Reference to the Distribution of Consumption in the United States. Compiled and Arranged by George A. Evans M.D. New York: D. Appleton & Co., 1888.

This is a very useful and hopeful contribution to the study of the distribution of phthisis: useful because it brings together in a digested and compact method such material as the census of 1880 and other more or less accurate reports available for the purpose, and hopeful because the study of vital statistics is a problem in this country which must be entered upon with zeal and mature preparation, and this book we take as a forerunner of what will be done more elaborately as the cities and States awake to the importance of establishing bureaux of vital statistics. Dr. Evans has done well to select phthisis as a particular study, as it is *the* scourge of the human race. More fatal and widespread than yellow fever, small-pox or cholera, claiming very many more victims than the most malignant of all diseases, and increasing in direct ratio to our civilization, it can be studied with more deliberation, and by reason of its easy diagnosis is probably more correctly enumerated.

The chapters are divided into a "Histosical Sketch," "Geographical Distribution of Consumption in Countries other than the United States," "Geographical Distribution in the United States," "Topography and Climate of States and Territories, and Summary for States, Groups, Cities and for Counties of Ten Thousand Population and Upwards, Showing the Number of Deaths from Consumption per Thousand Inhabitants," "Meteorology," "Etiology," and "Conclusions."

The deaths per 1,000 inhabitants from consumption in North Carolina is 1.5. By counties, Duplin (0.7) and Greene (0.2) give the smallest number among the eastern counties; Anson (0.6), Cabarrus (0.6), Cleveland (0.9), Gaston (0.8), Nash (0.9), Richmond (0.7), Union (0.7) give the smallest for the middle, and Ashe (0.2), Haywood (0.8), Henderson (0.8), Madison (0.5), Wilkes (0.9) give the smallest for the mountain counties. Greene in the East (0.2) and Ashe (0.2) in the West, show the smallest number of deaths from

consumption—these figures all for the ten years ending 1880, as collected by the Census Bureau, tabulated and compiled by Dr. Billings, in the Census Reports. It is also ascertained by consulting these tables that the Eastern (1.2) and Western groups (1.0) have the smallest ratio, and the middle group of counties (1.7) the largest.

This interesting volume will make valuable reading for Superintendents of Health and others interested in the numerical study of diseases.

THE EAR, AND ITS DISEASES, BEING PRACTICAL CONTRIBUTIONS TO THE STUDY OF ETIOLOGY. By Samuel Sexton, M.D. Edited by Christopher J. Colles, M.D. With Numerous Original Illustrations. New York: William Wood & Co., 56 & 58, La Fayette Place, 1888.

This volume has many excellent features which are new to the general practitioner, and its whole arrangement, after we get beyond the anatomy and physiology of the ear, is not in the usual rut of similar treatises. We do not know how the specialists in aural practice will regard the work, but our purpose will be answered if we give our impressions of its value to the general practitioner.

We learn that the author bases his work on the clinical material which for twenty years he has been accumulating, and that the records to his cases comprise "some forty thousand reference cards."

Passing by the anatomy of the ear and the physiology of audition, we notice a very interesting chapter on "Catarrh of the Upper Air Tract." So intimately connected is this disease connected with diseases of the ear, that its consideration is timely at this point in the volume. The author includes the following as concerned in this form of catarrh: the tympanum, mastoid, antrum and cellules; the turbinated bone interspaces, or nasal passages; the frontal sinuses; the ethmoidal cells; the antrum of the superior maxillary bones; the sphenoidal sinuses. The large sockets for the lodgment of the eyes, the oro-pharynx and the pharyngeal vault. As to the causative principle of this form of catarrh, the author inveighs against the resort to "malaria" as "a convenient cloak for our ignorance in respect to the origin of disease." * * * "The confounding of symptoms alleged to arise from so-called malarial poisoning with catarrhal inflammation seems to have for its origin the belief that a malignant miasm exists in the emanations arising from decaying

animal or vegetable matter, sewer-gas, stagnant water, etc., or is disseminated by the pollen or effluvium of plants. It is to be regretted that the accumulated literature of this subject, embracing the labors of writers for many centuries, cannot by incontestible evidence establish these tenets: proof of the existence of malarial poison, according to a contemporary authority, lies mainly in the alleged fact that the sickness it causes yields to the administration of quinine."

The above quotations gives the author's leaning on the subject of "malaria," and we must confess that of late years it is a term used with so much flippancy in and out of the profession, that we find ourselves using circumlocution or qualifying adjectives rather than employ the venerated word which has served so admirable a purpose for generations of doctors.

Under the heading "Meteorological Influences" we have set forth the real causes which are potent in producing catarrh, and nearly all of them might be said to be sufficient to develop certain groups of symptoms which we call malarial. We are pleased to see this frank attack, and while we cannot endorse what the author says, we think his arguments have strength.

From this somewhat theoretical ground we are carried into the more practical influence of "Oral Irritation," particularly into a consideration of dentition and caries as related to impaired hearing, then to the injury of the ears from bathing, and the use of the nasal douche, post-nasal syringe, and sniffing up of water.

The third part of the volume treats "of wounds, injuries and diseases of the ear and their treatment," and it might be presumed, from the rich resources of the author, is full of practical, sensible teaching. Before entering upon the consideration of the subject of the different forms of otitis, we are served to a resumé of the anatomy of the middle ear. With this chapter and the ones succeeding it, the general practitioner will resort to for consultation most frequently, and in it will be found diagnosis and treatment of the different forms of otitis well fortified with illustrative cases.

We do not see why it was necessary to give an account of Bell's paralysis in such a work, although it is most excellently described and illustrated, but the author informs us that of 16 cases of the disease paralysis of the facial nerve occurred during the existence

of acute inflammation of the middle ear. Part third of the volume closes with an account of excision of the drumhead and ossicles.

We have only intended to give a short sketch of the general features of this excellent work, and we are satisfied that it will be welcomed as original and in every way helpful to those for whom it was designed, and will add largely to the author's already widespread reputation.

The illustrations are largely original, and the book-making creditable to the publishers.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON GENERAL'S OFFICE, UNITED STATES ARMY. Author's Subjects. Vol. IX. (*Medicine-Nyrrelt.*) Washington: Government Printing Office. 1888. Pp. 1054.

Students are now beginning to wonder what they did before we had an "Index-Catalogue." So fully has it taken its place in the outfit of "researchers," that it is now indispensable, and they take it as a matter of course. The present volume completes the letter *N*, a pretty sure indication that the work cannot possibly be completed, as was at first contemplated, in ten volumes. The summary of the contents, as given by Dr. John S. Billings, the Librarian, gives 13,151 author-titles, representing 6,834 volumes and 12,818 pamphlets. It also includes 9,999 subject-titles of separate books and pamphlets, and 29,120 titles of articles in periodicals."

The above figures give but little idea of the immense work lying before us in these large double-column pages, and words of praise from us would only be the reiteration of what is now the opinion of the entire medical profession that it is a most admirable work, conceived by a broad-minded bibliographer, and carried out with consummate skill. The printing is far ahead of the books generally issued by the Government Printing Office, and in the 9th volume we see no depreciation of the excellent typography of the first. We know that Dr. Billings must now breathe more freely as he sees his precious manuscript, so long housed in a building insecure against fire, largely committed to "the art preservative of all arts": it will be his lasting monument.

CURRENT LITERATURE.

THE ANGLO GERMAN CONTROVERSY.

It is deeply to be regretted that the medical profession is again subjected to the evils of a bitter controversy between eminent representatives of the science. Beset as the divine art of medicine is on every hand by empiricism, and struggling as it is into the light of a higher intelligence, it is lamentable for its votaries to witness its blows against its dignity from those who have risen to just eminence in its ranks, and who should, by virtue of their distinction, be the conservators of all its best interests. Silence, even under great provocation, is always welcomed and appreciated by the profession at large, when by breaking that silence harm is done the whole body of medical men by lowering the high standard of professional dignity; and it is a very serious question how far a physician may go in defence of himself at the expense of the profession and its membership. Still, heated professional controversies are not so infrequent as to be remarkable when one does occur. In theology, law, medicine and politics, where discussions are not "cribbed, cabined and confined" by the rules of an exact science, and where opinion frequently takes the place of observed phenomena from which deductions are made and conclusions drawn, it is not uncommon to see acerbity in debate and temper shown by disputants. But for intensity of feeling and bitterness of language, no professional dispute of recent years can compare with that now raging between the British and German physicians who were in attendance upon the late Emperor Frederick. When we think of the exalted rank of the patient and the eminence to which the warring surgeons have attained—their wide reputation for learning and professional skill—it becomes almost incredible that such regrettable and embittered differences should exist as are disclosed in the indictment and answer of Sir Morell Mackenzie.

The highest political considerations, national pride and personal ambitions, without question, have entered largely into the dispute and contributed to its passionateness and intensity, and have fanned into a flame what may have been at first an honest difference of

opinion of every-day occurrence between professional men. But whatever may have been the rivalries, the jealousies and ambitions which led to the quarrel, the existence of the controversy itself cannot be ignored.

The accusation and the answer of the accused are before the public for decision and a verdict. And as it looks now like a Reply and a Rejoinder will soon follow before the pleadings are made up, we will confine ourselves to a brief examination of Sir Morell's brochure, issued in London this week, advance sheets of which are before us.

In May, 1887, Mackenzie was summoned to Berlin to see the Kronprinz. Upon arrival he was requested by the patient to examine his throat. He suggested instead a conference with the other doctors in attendance. They were Professors Gerhardt, von Bergmann and Tobold; Dr. von Lauer, Emperor William's physician; Dr. Wegner, Crown Prince Frederick's physician, and Dr. Schrader, a German army physician. The consultation resulted in the statement that there was a small growth on the left vocal chord, about the size of a split pea, which Dr. Gerhardt had attempted to destroy by galvano-cautery. An examination by Mackenzie followed, confirming the presence of the growth on the chord. Except for loss of voice the throat gave no trouble to the patient, no pain, no dyspnœa, no hindrance to deglutition, and to every outward appearance the Prince was "a model of stalwart health, far stronger than the average even of strong men."

After the examination the question of diagnosis came up. The three German professors pronounced the disease cancerous, and recommended external partial laryngeal excision. Mackenzie took the ground that "there was nothing characteristic in the appearance of the growth, and that it was quite impossible to give a definite opinion of its nature without a more searching examination." He proposed cutting off a small piece of the tumor with the forceps, and submitting it to Professor Virchow for microscopic examination, and to allow Virchow's report to govern the question of excision. This was agreed to, and the minor operation fell to Mackenzie (as he claims) because of the incapacity of the other gentlemen to perform this particular manœuvre.

It was at this first consultation that the seeds of dissension and hostility were sown, and which steadily grew till the death of the

patient temporarily put an end to the quarrel, but which was reopened in public with increased bitterness as soon as the doors of the tomb closed upon the illustrious dead.

It is not the province of this review to express any but a modified opinion as to the merits of the various questions involved in the dispute. Before any definite decision can be formed, the Reply of the Germans and the Rejoinder of Mackenzie will be essential to any fair and complete estimate of the evidence and facts in the controversy. However, there are many things in the statement under review which we may touch upon without prejudice to either side.

In this instance, that Mackenzie is fully justified in making an elaborate defence we believe no one acquainted with the facts will dispute. He has been assailed, from the day following his first arrival in Berlin, with all the weapons of political and professional warfare; his assailants have not only used the German medical journals, but have had full use of the secular and Imperial press as well. He was practically alone in a hostile camp, with the prejudices and passions of the people inflamed against him on account of nationality, encouraged, no doubt, by the powerful influences of the Court. His position was one of the greatest difficulty, not only because of the grave responsibility of the case itself, but what may be called the "external, political, professional and international complications." This hostility culminated at last in accusations, from the Berlin Imperial Press, equivalent to a charge of malpraxis, and we must agree with Mackenzie, that one must be more—or less—than man to bear such allegations in silence and without response.

The answer made, however, goes farther, and passes into such acrimonious criticism of Sir Morell's German colleagues as to amaze the reader and create hesitancy in accepting many of the allegations without first hearing the other side. The book presents such a narrative of intrigue, hypocrisy, theatrical pretence, jealousy, envy, suffering and professional incompetency, as to be discreditable to humanity; and if but a portion is substantiated, it will show the immeasurable advance of English and American practice, not only in medical and surgical skill, but also in those humanities and amenities of life which have done so much to elevate and ennoble the profession in the popular mind.

Here we have presented to us the spectacle of an eminent German

surgeon burning the vocal chord with the galvano-cautery, daily, for twelve consecutive days. We see professional gentlemen who first tell the world the private details of professional consultations, and shock the patient and his family with undetermined suspicions of a horrible disease, and afterward lecturing in public, while the patient yet survives, upon a newer theory of the disease—a theory which, while it could not add anything to the terrors that cancer conveys to the mind of a patient, yet did add the shame and humiliation of an allegation that the trouble was due to venereal contagion. We find an accusation that a consulting surgeon deliberately mutilates his victim to bear out a false theory of diagnosis; spies surround the surgeon in charge and follow him from place to place, and incompetent pretenders are permitted to torture the patient in order to support their own claims to importance and learning; truculence takes the place of independence of thought and integrity of opinion, and a most extraordinary and unaccountable butchery, by an over-stimulated or excited surgeon, closes the mournful scene. Taken all in all, it is difficult for the imagination to picture a more revolting play of the baser passions than we find depicted in and between the lines of Mackenzie's narrative. It is a recitation in any point of view to be regretted and deplored, and we hope, for the good name of the German faculty, who have contributed so greatly to modern medical learning and research, that the gravity of the charges brought by Sir Morell may be modified by further facts and explanations.

It may be said, however, to the credit of medicine, that the cause and origin of much that was discreditable in the conduct of the case was extra-medical, and due to the court intrigues at Berlin.

This much in a general way; and now, upon the main point at issue a few words:

The fundamental issue between Sir Morell and the German physicians appeared at the first consultation. The Germans believed the disease to be malignant, and the result proved they were right; for, however much we might condemn the practice of galvano-cautery as used by Professor Gerhardt, yet we cannot agree with Mackenzie that this led to the subsequent development of the disease. But, in the light of American conservative surgery, we do endorse Mackenzie's procedure in first seeking Virchow's report as to the microscopical appearance of the growth before accepting the theory of cancer, especially when that acceptance was the first step to an operation of

the gravest and most doubtful import. Virchow's report justified Mackenzie's position, and, after the reception of the report, which was negative in its conclusions as to cancerous conditions, even they who advocated laryngeal excision could not consistently demand it in the face of Virchow's great pathological authority.

To illustrate: Suppose excision had been performed at this time, and that the patient had succumbed, either under the knife or a few days or weeks afterward, as is commonly the case. Suppose, then, the report of Virchow upon the excised portion had been the same as he did give, showing no cancerous condition present. What would then have been the professional and lay verdict against the physicians responsible for the seemingly needless and hazardous performance? Inexcusable and unpardonable.

This difference at the beginning was the fundamental one, and from it sprang all the subsequent disputes and controversies. What the result might have been if excision had been resorted to, can only be conjectured. If the operation were to be performed at all, there is no question that it was better early than too late and in this the German view seems right; but in the light of all the facts, the subsequent history of the case, and the tables of similar cases, American opinion, we think, will incline to the belief that excision would not have prolonged life much more than the course pursued extended it, and that, in addition to this belief, the general treatment which was followed avoided the grave dangers and accidents of the major operation. While American surgery has been on many occasions both brilliant and original, yet we feel that its general tone is one of conservatism and great caution, because, no doubt, of the great practical character of our people; and on the basis of conservative surgery American opinion, we think, will be with Mackenzie upon this most important feature of the case. As to the controversies which were incessant in conducting the case on this general line of treatment, we do not care to speak until both sides are fully before the public, and possibly not then, as they are subservient to the central difference, and are more of personal than professional interest. Yet, notwithstanding all that has been said and done and written about this celebrated case much of which was calculated to lower the popular esteem of the efficiency of medical treatment, we cannot rise from a perusal of this book without a profound sense of the resources and skill of modern medicine and surgery, of which the Crown Prince had the benefit, and

by and through which his life was prolonged to the ascent of the Imperial throne and the assumption of his inherited rights and dignities. We cannot close this brief review without a word in eulogy of the great soul that bore up so manfully under conditions that would shake the firmest resolution and the stoutest heart. Throughout the terrible ordeal the illustrious patient bore himself with a heroism that will adorn the page of history, and always command the respect and love of his fellow-men in every walk in life.—*The Medical Record*.

SURGICAL TREATMENT OF EMPYEMA.

By HOWARD MARSH, F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital.

(Read at a Meeting of the East Anglian Branch, at Eye.)

* * * * *

In a general sense empyema comes under the head of abscess, and therefore, to determine its treatment, it is necessary to consider what is the best treatment for abscess at the present day. Formerly large abscesses were left to burst spontaneously, because, if left to themselves, they pointed and evacuated their contents safely, and without either local or constitutional disturbance; whereas, when they were opened, septic changes, increased suppuration and hectic generally followed. But this practice of non-interference has by many been set aside. Means are now known by which septic changes can be prevented, and even very large abscesses can, with due care, be opened with impunity.

Another important advance has been the recognition of the fact that, although in some situations abscesses may exist for long periods without leading to any bad result, pus, even when it is "well-formed and healthy," is an injurious and destructive agent, for it leads to erosion and absorption of the neighboring tissues; it burrows widely, and leads to the formation of long sinuous passages lined with degenerating pyogenic membrane; it sometimes makes its way into a large blood-vessel or into a joint; or, in the case of empyema, its presence is associated with the compression and bind-

ing down of the lung, and sometimes with ulceration of the pleura and necrosis of the ribs. On the two-fold grounds, therefore, (*a*) that there are grave dangers in leaving large collections of pus to burst spontaneously, and (*b*) that there are means by which pus can be safely removed, the practice with a large number of surgeons at the present day is to open abscesses as soon as they are detected. My belief is that, with further experience of the vastly improved results of interference, early evacuation will become the rule to which there will be but very few exceptions. There is a further argument in favor of letting matter out at once. It is that the mere presence of a collection of pus promotes suppuration. In common, no doubt, with many other surgeons, I have often met with cases in which, although before the abscess was opened it was enlarging at a rate which indicated that half an ounce of pus was being formed every day, after evacuation the quantity of pus discharged amounted to only a few drops, and soon entirely ceased. But the contention that, as an abscess, an empyema should be evacuated as soon as its presence is established is strengthened by the danger that the lung may become bound down. From this point of view every day is a matter of importance. Nor, in this connection, must other results be forgotten. The patient may be placed at a great disadvantage by the bursting of the abscess into the air passages; and a few weeks since a case was met with in which suppuration had extended through the diaphragm and produced fatal peritonitis. That there should be no delay when once pus has formed in the pleura, I should, speaking merely as a surgeon, think it advisable, if empyema were so much as suspected by the physician, to introduce a fine needle connected with an exhausting syringe, to ascertain whether matter could be reached.

Whether in the treatment of empyema the aspirator should be used is, I think, a doubtful point. I believe that, generally, it is better to make an incision and establish free drainage. The aspirator may, no doubt, be successfully used, and after two or three, sometimes after a single aspiration, the formation of pus may cease. Yet, as a rule, it is necessary sooner or later to make a free opening; and it seems advisable, in order to give the lung an opportunity of expanding as soon as possible, to open and drain the pleural cavity at once. The cases in which the aspirator is most likely to be successful are those of recent empyema, but these are also the cases

which do best under free incision and drainage. In cases of long-standing where pus is thick and flaky, and where the pleura is lined with a thick deposit of lymph, drainage through a free opening seems to be decidedly called for. As pus is often too thick to flow through the needle, it is necessary, in any case in which aspiration is to be tried, to arrange beforehand that, if the tube becomes blocked, the means are ready for making a free incision.

If, as I think best, an incision is determined upon, an important point is where this should be made. On this question, as well as on the general subject of empyema, the valuable lectures of Mr. Godlee (*Lancet*, vol. i, 1886) should be carefully studied. The main thing is to secure the best drainage of the cavity, and I agree with Mr. Godlee that this is obtained by making the opening in the eighth or ninth intercostal space just external (or anterior) to the angle of the scapula.

As Mr. Godlee points out, an opening at the lowest part of the chest where the cavity is soonest obliterated is less efficient for drainage than one placed higher up opposite the part of the empyema, which is the last to close. The opening is best effected by making an incision through the skin and muscles of the intercostal space, and by then thrusting a director into the pleural cavity and dilating the track thus secured by dressing forceps. No hæmorrhage of any importance is likely to occur by this method. During the operation the patient should be under chloroform, and should be placed on the affected side and over the edge of the table, so that the action of the sound lung is not impeded. An important question is whether part of a rib should be removed in order to secure space for the introduction of a tube so that efficient drainage is established. In adults, in whom the intercostal spaces are wide, this need not, I think, be done. Nor is it always necessary in young children. I have notes of several cases in which the empyema closed completely in less than three weeks after simple incision. Yet the space between the ribs in children is often so narrow that a tube of sufficient size cannot be introduced. In such cases about three-quarters of an inch of the rib just below the incision should be removed. The operation can be performed very easily with cutting bone forceps. It is advisable, I think, to remove the periosteum also, for otherwise the reproduction of the rib takes place so quickly that drainage may become difficult. I have never met with

any hæmorrhage that could not at once be arrested, for the wound is open, and any bleeding vessel can be readily found and tied.

Another point is whether the cavity of the empyema should be washed out with an antiseptic lotion. I agree with those who think this should not be done in ordinary cases. It is well known that the proceeding has been followed by serious symptoms; while in a large number of instances the washing out seems unnecessary, for the pus withdrawn is quite free from decomposition, and the cavity has remained aseptic throughout. But in cases in which the discharge is from the first, or subsequently becomes, fetid, irrigation is very advisable. I have used a 2 or 3 per cent. solution of boro-glyceride; boric acid lotion; and a solution of 1 part in 1,000 of tincture of iodine in water. The fluid used should be raised to a temperature of about 90°.

The prognosis, I believe, turns almost entirely on the duration of the empyema. In early cases—those within a month—recovery will, as a very general rule, take place. Sometimes it occurs very rapidly. In some instances the wound has, in children, entirely closed within a fortnight; but in cases of long standing the prospect is often very doubtful. The lung has become bound down; suppuration continues to be free; pus is apt to be retained, locked in by adhesions; the granulations covering the pleural surface become callous; not rarely there is necrosis of one or more of the ribs; while the general condition of the patient steadily deteriorates, and amyloid degeneration of the internal organ not rarely ensues.

In cases in which the empyema is chronic, and in which suppuration continues after a free opening has been made, Estlander's operation, consisting of the removal of a portion of two or more of the ribs, should be performed. This operation is certainly of great value for two purposes. In the first place, through the free opening which it provides the finger can be introduced, and any adhesions that are found to be obstructing the free escape of pus can be broken down, so that free drainage of the deeper parts of the pleural cavity is secured. This is a matter of great importance. Adhesions may form in such a way as to bar the exit of pus from some part of the sac, and till they are removed no progress towards healing will take place. In a case lately under treatment, in which the temperature remained high after part of a rib had been resected and a tube inserted, I resected another rib and introduced my finger, and

encountering some adhesions, carefully broke them down. On doing so I found I had opened up an encysted collection of about an ounce of pus. After this the temperature fell to normal, and in about three weeks the secretion of matter had ceased, and the wound was soon soundly healed. In another instance, in a child, aged 5, in which no progress was being made, I found, on introducing the finger, that a sinus ran for some distance in a direction upwards. This I dilated, and detected a collection of pus partially shut off from the rest of the pleural cavity, and lying nearly as high as the clavicle. The sinus was dilated, and the empyema subsequently closed.—*British Medical Journal*.

THE IODOFORM QUESTION.

Ever since the Danish experimenters, Heyn and Rovsing published their sweeping denunciation of iodoform as an antiseptic, observer after observer has come forward with his contribution to the merits of the case. Freyer has put all these together to determine the present status of the question, and abstracts of the various papers, with the references, may be found by consulting his article. A similar resumé is given by von Kahliden. In general, the results obtained have been such as to confirm the statements of Heyn and Rovsing. In the main, the experiments, whether in artificial culture or on animals, showed that iodoform has no direct antibacteriological action on the different micro-organisms in general. Only three observers seem to prove the opposite, and Freyer calls their conclusions strongly into question; for example, Sattler declared that a silk thread covered with a fine layer of iodoform showed only a limited development of bacteria, but Freyer wonders if the iodoform did not form a mechanical protection. In regard to Sanger's conclusions that iodoform hinders the development of the bacillus of anthrax. Freyer declares them flatly contradicted by his own experiments as well as many others, and finds in the prevention of contact an explanation for the failure of the culture to inoculate on a wounded surface.

In any case Freyer goes on to say, the many positive experiments

according to which pathogenic bacteria still continue active and capable of developing, though intimately mixed with iodoform, force us to the conclusion that in general iodoform is no antiseptic or parasiticide, in the sense of a disinfecting agent, even though on single bacteria, as, for example, the cholera bacillus it acts destructively, and in the case of others hinders growth. Of the application of iodoform to wounds and suppurating surfaces, it may be said that it hinders the free formation of pus in spite of the fact that it is not directly destructive to the cocci of suppuration; but it is to be noted that no surgeon relies upon the direct antiseptic action of iodoform, no matter how enthusiastic he may be in advocating its use; in other words, no surgeon pins his faith to the use of iodoform alone, but first conducts an antiseptic operation, and then makes the wound aseptic before using iodoform. Even Mikulicz himself, the warmest defender of iodoform, rinses his iodoform guage in carbolic acid before applying. The local anæsthetic effect of iodoform should not be forgotten, but its great value to the surgeon lies in its power to diminish secretion, and that for a long period.

This, various observers, but especially de Ruyter, believe to be connected with the action of the free iodine on the ptomaines generated by the bacteria. De Ruyter found that when pus and iodoform were mixed and allowed to stand, after three days iodine compounds were present, and second, that the ptomaine cadaverin formed an inert compound with iodoform. To draw from this a general conclusion upon the action of iodoform in wounds, however, is unjustifiable, because, even supposing that ptomaines played so important a part in surgical infection, hitherto all attempts to demonstrate ptomaines in connection with the commonest and most feared bacilli (suppuration, erysipelas, etc.), have failed; nor would it help the position of iodoform at all because the possession of a positive action on ptomaines (formed secondarily to bacteria), would not save it from condemnation as a surgical antiseptic; namely, a substance capable of disinfecting wounds and of hindering general infection by destroying the bacteria (Rovsing). It would explain, however, as Rovsing points out, the favorable action of iodoform in regions where decomposition and the formation of stinking ptomaines is unavoidable; namely, in the rectum, mouth, nose, and in part in the vagina. Yet even here the want of antiparasitic power is often displayed, adds Rovsing, for he has repeatedly seen cases of extirpation of the lower jaw or of the

uterus per vaginum, die of septicæmia, even when the use of iodoform kept the wounds sweet and fresh in appearance. Neisser, who is the last to investigate the question, declares that no simple picture of the processes going on in wounds can be formed; in general, he finds iodoform first antiparasitic after certain reducing processes, whether on the part of the tissues or of the bacteria themselves, have liberated free iodine or hydriodic acid, which alone are of antibacteriological significance.

SUBSTITUTES FOR IODOFORM.

(a.) *Bituminated Iodoform*.—This originated with Ehrman, assisted in the clinic for syphilis, Vienna, who furnishes a description and report of its use in the *Centralbl. f. gesamte Therap.*, July, 1888, p. 385. After much experimenting he succeeded in combining tar with iodoform and forming this substance, which, under the microscope, shows no longer the characteristic iodoform crystals, but only hyaline plates. The iodoform odor cannot be distinguished, though it is brought out by a large quantity of water; on this account there might be some odor in wounds with abundant secretion. The peculiar odor is that of tar, which may be covered by styrax. Ehrman gives the results in twenty-two cases of chancroids and buboes, iodoform being alternated for purposes of comparison; the results were uniformly good, some cases doing well under the new preparation, where the iodoform failed. Ehrman places three points of superiority to its credit, (1) absence of disagreeable odor, (2) absence of the eczema and erythema which iodoform often causes, (3) a uniformity of action on granulating surfaces, which iodoform often seems to lack.

(b) *Soziodol*.—This compound was introduced by Lassar (*Ther. Monatshefte*, 1887, p. 439). It is a white powder, showing under the microscope flakey, leaf-like crystals, containing iodoform (42 per cent.) phenol and sulphur, easily soluble in water and alcohol, and very stable in mixtures. It is borne well in powder and ointment by the healthy skin, and is soothing to an inflamed and irritable integument. Lassar used it in 5 to 10 per cent. powder and paste with the zinc oxide—amyl, vaseline base of his paste, or with lanolin. He had good results with it in acute and chronic eczemas—herpes, impetigo, inflamed skin and mycotic diseases. In varicose ulcers he

prefers it to salicylic acid. Fritsche (*Ther. Monatshefte*, 1888, June, p. 283), has used it in diseases of the nose and larynx with the greatest satisfaction. There are, in all, four combinations of the substance with bases; namely, with sodium, potass., zinc and mercury. The first two, of a bitter, soapy taste and smelling of lye; if applied to the nasal mucous membrane pure, cause only a moderately strong burning, and an increased secretion of mucus. The zinc ointment must be reduced to one-fifth to one-tenth, and the mercury salt, which is very irritating, to one-tenth to one-twentieth. All were used as powders only. In atrophic catarrhs, ozæna and pharyngitis sicca. Fritsche had much better results than with other applications. The secretion was increased, the swelling of mucous membrane, where present, diminished. Operative wounds in the throat and nose healed much more quickly than usual. All of the thirteen cases of tubercular ulceration showed tendency to cicatrize, but at the time of writing no ulcer had completely closed.—*Boston Medical and Surgical Journal*.

THE ADMINISTRATION OF THE IODIDES.

Dr. Sée, says our Paris correspondent, finds that most patients prefer the iodides given simply in water. What is it, he asks, that is removed here? Evidently not the microbes or their products, which cannot well be destroyed. It is the newly formed tissues themselves, or the fatty elements that go to make them up, that are reduced in amount. Cure by the iodides, then, does not depend on a specific action, but on a general modification of nutrition either for good or for evil. The patient either gets better and fatter, or worse and thinner. As to the idea that the potassium salts are muscular poisons, he shows that the sodium salts injure the excitability of muscle as rapidly as the potassium salts. Next, as to the allegation that potash has a poisonous action on the heart, he says that it also is false. Bernard and Traube *injected* potassium salts to prove that it was well founded; but this has no relation to iodide of potassium taken by the stomach. As much as from one to four drachms are often given without producing any bad effect. As to

potash itself, Dr. Sée shows that Bunge had calculated that there were 96 grains of potash in 3 ounces of potatoes; so that the poor Irishman who eats 32 to 48 ounces of potatoes a day swallows from $2\frac{1}{8}$ to $2\frac{1}{2}$ ounces of potash! What is this compared to the 30 grains that we give a day? This fear of potash is not founded on fact. Finally, the iodide of sodium has been said not to cause iodism, but in truth, patients taking it have just the same symptoms of eye, nose and other mucous troubles as with the potassium salt. The elimination of the iodide by the saliva is the same; the same metallic taste and repugnance for food follow, and, moreover, more of the sodium salt must be given to produce an effect. Professor Sée concludes that there is nothing to be gained by giving the sodium salt, while potassium iodide possesses certain advantages on account of which it should retain the favor in which it has always been held.—*New York Medical Journal*.

LANOLIN AND BORIC ACID IN SKIN DISEASES IN CHILDREN.

The combination of lanolin and boric acid as an ointment is said to have a most gratifying effect in certain skin diseases in children, especially eczema of the head and face, intertrigo and seborrhœa. In the case of eczema, for example, with raw patches on the cheeks and yellowish crusts on the head, the surface is first cleansed in the usual way, and then dusted over with finely powdered boric acid. On the following day this washing and dusting over is repeated; already the inflammation will seem lessened. The process is then repeated twice daily, the washing being always done gently, until the skin is in a condition to bear an ointment containing 30 per cent. of lanolin and 8 per cent. of boric acid. In the squamous form of eczema with considerable induration, olive oil is well rubbed in and then removed with Castile soap, and an ointment containing $\frac{1}{2}$ or 1 per cent. of salicylic acid with 30 per cent. of lanolin is energetically applied according to the degree of induration. This washing and application are repeated twice daily. The strikingly beneficial action of this course of treatment, which is less painful than the use of strong alkalies or oil of cade, is ascribed to the penetrating properties of lanolin, which thus facilitates the entrance of salicylic acid into the deeper layer of the epidermis. Dr. Russell Sturgis, who advocates the above treatment, also finds lanolin a reliable means of alleviating the irritation due to chronic urticaria.—*British Medical Journal*.

NOTES.

THERE is a medical popularity and a political popularity: the one is worth about as much as the other.—*Union Medical du Canada.*

DRS. OSLER has accepted the appointment as Professor of Practice of Medicine, Johns Hopkins University, and resigns his present chair in the University of Pennsylvania.

THE death of Dr. F. R. Campbell, author of "The Language of Medicine," we see announced in the *Buffalo Medical Journal*. He was a good scholar and highly esteemed by his colleagues.

DRS. H. T. BAHNSON and the Secretary of the State Board of Health will represent the State Board at the meeting of the American Public Health Association, to be held in Milwaukee on the 20-23 November.

DRS. A. A. HILL, of Lexington, died last month, we regret to record, and hope to have a sketch of his life. He was a modest, earnest member of the Medical Society, and will be lamented by a large circle of patrons.

NEW DISINFECTANT.—RES. Essence of rosemary 100 parts, lavender 25 parts. thyme 25 parts, nitric acid 200 parts. Shake the bottle and pour a little on a sponge and allow it to evaporate in a room to destroy odors.—*Med. News.*

PROF. JOHN S. LYNCH, M.D., of Baltimore, we regret to learn, is amongst the distinguished dead of our profession, recently. With our deep regret for such losses, we have the assurance that the ranks of our beloved science are being recruited from the best educated men in the land, and that painful deaths and gratifying promotions step rapidly on the heels of one another.

NICKEL IN JACKSON COUNTY.—We learn from the *Bulletin of the Elisha Mitchell Society* that Dr. W. B. Phillips has discovered nickel in some ore sent from Jackson county. The sample ran 14.89 per cent. metallic nickel. This is the first discovery of nickel (Garnicite) in the eastern United States. This metal is not used medicinally, but it is interesting to all classes of readers to hear more of the discovered resources of the State.

DR. E. WILLIAMS, of Cincinnati, Ohio, the veteran ophthalmologist, died in that city, recently, of an organic disease of the brain, from which he had been a sufferer for about two years.

ALBUMINURIA IN INDIA.—Hailey (*Indian Med. Gazette*) states that a combination of advanced anæmia and malarial blood disintegration alone are sufficient to produce albuminuria.

PROF. J. W. S. ARNOLD, M.D., a native of South Carolina, the gifted teacher of Physiology in the Medical College of the University of New York, died on the 20th of October, Sewanee, Tenn.

THE next meeting of the American Public Health Association will be held in Milwaukee from the 20th to the 24th November. Dr. C. N. Hewitt, of Minnesota, will preside. The last volume of the Transactions of this Association is equal to the best, and will be noticed at length in our next issue.

THE SPLEEN.—In "The Spleen," a poem written by Matthew Green some hundred years ago, occurs the following suggestion for the "blues":

"To cure the mind's wrong bias, Spleen,
Some recommend the bowling green;
Some hilly walks; all exercise;
Fling but a stone, the giant dies."

—*Medical Record*.

THE SALIVA AS A TEST FOR FUNCTIONAL DISORDERS OF THE LIVER (*British Medical Journal*).—Dr. Samuel Frederick has called the attention of the profession to the presence of sulpho-cyanide of potassium in the saliva in relation to functions of the liver, the theory being founded in the belief that its presence is due to proteid metabolism. In 23 cases of jaundice the salt was found deficient in 18, the conclusion being that it is "probable that in order that the salt should appear in the saliva the bile must be able to enter the duodenum." The mode of estimating the presence of sulpho-cyanide is a color test. A salt of iron is added to the specimen of saliva and the intensity of the hue resulting. The study is an interesting one, and may yet become of clinical importance, the difficulty now being to avoid errors arising from the introduction of food containing sulphur, and to ascertain the total daily amount of sulpho-cyanide.

PROF. CHARCOT'S fee for treating the Emperor of Brazil was \$8,000.

HEADACHE AND SALT.—Dr. Rabow has found that an attack of migraine may often be averted by a teaspoonful of table salt taken upon the first appearance of the premonitory symptoms.

FOR cleaning off smegma and greasy applications used in treating balanitis and similar conditions, there is nothing equal to benzine. The application is painless, and it cleans the surface without rubbing. It also seems to have a curative effect upon ulcerations.—*Cincinnati Lancet-Clinic*.

WHOOPIING COUGH.—During the catarrhal stages of whooping-cough, remedies are used that have been found useful in ordinary bronchial catarrh, as: R. Syrup scillæ comp., f ʒ j; tinct. aconiti rad., ℥ xvi; tinct. opii deodorat., ℥ viij; syrup, tolu, f ʒ vij; aquæ lauro-cerasi, f ʒ j. M. Sig.—A teaspoonful every 2, 3 or 4 hours.—BARTHOLOW.

FOR INFANTILE URTICARIA.—At bedtime use the following pomade: Chloral hydrat., camphoræ pulv., acaciæ pulv., āā drachm j. M. Triturate until liquefied, and then add one ounce of cerate. This relieves the pruritus, permits the infant to sleep, and puts a stop to scratching. In the morning anoint with: Acid carbolic, gr. vij ss; amyli glycerol, oz. j. M. The child must be clad next the skin in linen.—*American Medical Digest*.

CHLOROFORM-WATER AS A SOLVENT FOR DRUGS.—Dr. Unna has employed the antiputrefactive power of chloroform-water for the preservation of solutions of drugs for subcutaneous employment. When a solution of chloroform-water is injected under the skin a slight burning sensation is produced; but general action attributable to chloroform is but rarely produced. In many cases, however, no objective sensation follows the injection of chloroform-water in the gluteal muscles. Unna commends the substitution of chloroform-water for distilled water in the preparation of Fowler's solution, and all ergotine preparations, even when intended for internal use. He likewise recommends the addition of a few drops of chloroform to morphine solutions, and, in fact, he finds it preferable to dissolve all alkaloids, whether intended for internal or external use, in solutions of chloroform-water.—*Therapeutic Gazette*.

TREATMENT OF PUERPERAL ISCHURIA.—Schatz (*Wiener med. Presse*, No. 26, 1888) advises dilatation of the urethra, to admit the little finger, in these cases. The procedure is not exceedingly painful and gives good results. Mild cases usually yield to catheterization. Battlehner advises local applications of cocaine, 10 per cent. solution. Skutsch accustoms his patients, before labor or operations, to urinate while lying in bed; he is thus obliged to have recourse to catheterization very rarely.

TREATMENT OF DYSENTERY BY NAPHTHALIN ENEMATA.—Dr. Gintergoff (*Russ. Medits.*) orders seven or eight grains in an ounce of water for a single enema, and finds that this in a very short time relieves the tenesmus and the burning sensation at the anus. The patient is able to obtain rest and sleep, and in some cases is cured without any repetition of the enema. In other cases two or three enemata have to be given at intervals of a few hours. Where needful, this treatment is combined with the internal administration of quinine.

CREASOTE AND IODIDE OF POTASH IN PHTHISIS.—G. Stuecker (*Therap. Monatsheft*, 1888, 385) has studied the conditions for the employment of these two drugs, and concludes from his experience that each has its limited sphere of action. Creasote is useful in those cases of phthisis of the nature of caseous pneumonia; while iodide of potash is to be preferred in fibroid contraction of the lung with adhesive pleuritis. In mixed forms of cheesy and fibrous tuberculosis the one or the other of the two drugs is to be employed, depending on whether the cheesy or the fibrous element predominates. In a third group of cases, in which the involvement of the bronchial mucous membrane produces a purulent or mucous bronchitis, the employment of the iodide is entirely excluded, and the balsams are to be given with or without creasote. A fourth group, in which the symptoms of emphysema are predominant, is to be treated with iodide of potash. Contra-indications for the use of creasote are tuberculosis of the intestine, amyloid degeneration, and the late stages of phthisis. Contraindications for the use of iodide of potash are tendency to hæmoptysis, even slight lesions of the larynx (on account of danger of œdema of the glottis), ulcerative processes in the trachea, insufficiency of the kidney of whatever nature, and severe iodism.

COMPRESSING FORCEPS.—At the last meeting of the British Medical Association Dr. More Madden, in the "Address upon Obstetrics," expressed his belief in the forceps as preferable to destructive instruments, and superseding them by reason of its compressing power. He had devised a short forceps which allowed the fœtal scalp to protrude freely through its fenestræ when compression is made; and also long forceps armed with a compressing rod and screw similar to those used in a cranioclast. In addition, the latter forceps is supplied with a pair of detachable traction rods, allowing the exercise of traction at any angle.—*British Medical Journal*.

CALCIUM CHLORIDE IN GLANDULAR AFFECTIONS OF THE NECK.—Thomas J. Mays (*Archives of Pediatrics*, 1888, 471) reviews the employment of calcium chloride, formerly used in scrofulous affections. He has used it for several years, especially in scrofulous affections of the neck, and found it to act admirably in many cases in which cod-liver oil internally and iodine externally had proved futile. It can be given in milk or water in doses of two to four grains for children, and ten to twenty grains for adults. The best vehicle, however, is syrup of sarsaparilla. It must not be confounded with the chloride of lime used for disinfecting; and to avoid this confusion the *granular* chloride of calcium should be ordered.

INTERESTING CASES OF TWIN PREGNANCY.—Rivière (*Archives de Tocologie*, No. 7, 1888) reports a case of twin pregnancy in which one fœtus and placenta occupied the upper half, and the other fœtus and placenta the lower half of the uterus. A membranous partition separated the two. The placenta of the lower ovum was attached as low as the inferior segment, but as the head was very small, dilatation sufficient to produce placental hemorrhage did not occur. Two cases are also described in which one fœtus was killed by an injury to the mother, while the other survived. A case of twin pregnancy with obstinate vomiting is also reported, in which labor was induced. Rivière believes that over-distention of the uterus producing exaggerated nervous reflexes is the cause of obstinate vomiting.

OBITUARY.

R. E. LEE DIXON, M.D.

Dr. Dixon was born in Carteret county on February 14th, 1861. He came to Wilmington in 1870 quite a stripling, in poor health and poorer in purse. He had had few advantages of schooling, but he was possessed of an insatiable thirst for knowledge. In every step he took he kept uppermost in his mind the goal of his ambition, the attainment of learning. He found employment in the Wilmington Cotton Factory, and found there a warm friend in the Superintendent. This latter gentleman, fully aware of the great disadvantages that Southern young men labored under, especially in obtaining education, begun a night class, in which he instructed the poor lads who all the day long bent over their looms. His own modesty, and maybe morbid sensitiveness, about being mentioned publicly in connection with the great work he did for these young men, constrains us to withhold his name, but the moral and intellectual impress given to them is a constant memorial of his faithfulness.

With this additional stimulus to his own natural powers, young Dixon all but buried himself in his books. Not satisfied with studying half the night, he carried his books to the mill, and at every moment he could snatch he was poring over his self-imposed task. He also found an early friend in two physicians, who were struck with the intellectual grasp of the rather peculiar sickly lad, and owing to this encouragement he resolved secretly upon making the study of medicine the ulterior object of his ambition. When he made his thoughts known, he was dissuaded, because he knew nothing of Latin and Greek. Thinking it only a whim, one of the gentlemen advised him to begin with Greek, and after he had mastered it take up Latin. But Dixon was in earnest, and investing his scant earnings in Bullion's Grammar, he went manfully to work, and after a year of silent plodding with very little help, he had advanced very satisfactorily, and then he took up Latin in the same way. So intense was his application that his reticence and shyness of companions of his own age left him almost to himself: no one understood him, and his secret ambition was so sweet to him that he preferred to enjoy it alone.

His scholarship had now attracted the attention of a few friends, and he was offered assistance to give him a collegiate education. Some peculiar ideas and love of independence caused him to reject the

proffered aid, and now he determined to strike out for himself and begin the study of medicine. His long course of study in the elements pursued had brought him to a point of proficiency above the average of young men, and he was admitted as an office student. He commenced the study of Attfield's Chemistry as an experiment, so as to enable him to determine whether he was going to like medicine. "For," as he expressed it, "he loved nature, and knew no way to come near to a knowledge of it except such contact as medicine permitted.

There was no living to be had by studying bugs and plants, and so he must find in medicine the nearest approach to his ideal." With this intent he set about his task. He committed every page to memory, but it did not satisfy his reasoning faculties, so, in order to prove all things, he built a shanty in the yard of his mother's residence, and with his scanty means performed every experiment set forth in the book that did not require too much outlay. His recitations were perfect, and when it was pointed out to him that, although he might commit such a volume to memory and know nothing about chemistry, he gave abundant evidence that he had stowed his mind with the whole subject logically and practically. A whole year was spent in this (to him) delightful contact with physical law and the properties of matter, and then it was evident that it was not proper to put further obstacles in his way to the study of the other text-books in the course. Each text-book he took in turn, until in three years he had mastered the course with the exception of one branch.

Now came his anxiety about the selection of a college, which he did after examining every catalogue and making a personal visit to New York by sea, finally settling upon Philadelphia and the Jefferson College. His graduation was a matter of course, and his license was awarded by the North Carolina Board of Medical Examiners.

His career was a bright one: intense application had undermined his health: separation from the usual companionship of young men of his age had caused marked angularity of character, and lack of polish had not made him very acceptable to the masses or to the highly cultivated. But he was oblivious to all this, and worked with full confidence in his destiny. Alas! the fell destroyer, phthisis, laid its consuming hand upon him, and before only a few friends knew how great an intellect he had, he was summoned into eternity.

A final word about such a remarkable character: This sketch is written not only as a memorial, by one who loved him, but designed as a lesson of encouragement to other young men who are making a similar fight for the mastery. As death became more and more imminent, he looked forward with doubts and misgivings. He had read the Bible with remarkable assiduity for years, trying to perform the intellectual feat of mastering it, but failing, as all must fail who approach it in that way. But the light of truth came, and he was enabled humbly as a little child to accept the salvation offered to him, and unto the day of his death his regret was that he had not earlier given his powers to the service of Christ. It seems a thousand pities that so powerful an intellect should have been silenced in death at such an early age, but it is the old, old lesson, written every day for our instruction.

ERYSIPELAS TREATED BY ISINGLASS PLASTER.—Applications of white lead paint in erysipelas having been followed by good results, supposed to be due to the exclusion of air, led Prof. Wolfier to experiment with linseed oil and various other substances. He now reports that he has found strips of isinglass sticking-plaster very efficacious, the fever rapidly declining and the erysipelatous blush howing no disposition to spread.—*New York Medical Abstract*.

DIPHThERIA IN CATS.—Dr. Bruce Low (*Sanitary Record*, June) reports an epidemic of diphtheria in cats, by which many of the animals died. The following incident is given to show the possible connection between diphtheria in cats and persons. A certain cat licked up some diphtheritic vomit from the floor, and, as is usual with its kind, spent the evening in festivities on the back fence. A few days later a neighbour's favorite tabby was observed to be ill and was tenderly nursed by four little girls, all of whom had diphtheria. The moral of this is: Keep domestic pets, both dogs and cats, out of the house where there is an infectious disease; even if kept out of the sick-room they are liable at any time to devour the rejected food or drink of the sick.

READING NOTICES.

DR. S. COOKE INGRAHAM, Kalos street, Philadelphia, Pa., writes: "I used Lactated Food in a case of typhoid fever complicated with pneumonia, with the very best results."

HAND-BOOK OF PHARMACY AND THERAPEUTICS (LILLY), 248 pages, Third edition, thoroughly revised. Eli Lilly & Co., Indianapolis, July, 1888.—The aim of this book, as stated in the introduction, "to furnish the busy practitioner a reliable means of ready reference, at once concise, systematic and authoritative, to which he may refer with confidence in cases of doubt. Younger members of the profession and medical students will find this little work full of suggestions." It will be sent free to any physician, druggist or medical student by addressing Eli Lilly & Co., Indianapolis, Ind., mentioning this journal.

AN examination of the attack upon the value of Reed & Carnick's soluble food is, we believe, a deliberate job to damage the reputation of manufacturers whom we believe to have shown great enterprise in supplying first-class food substances for invalids, and who have guarded their reputation with jealous care:

"A CORRECTION.—The *Boston Medical and Surgical Journal*, from which an extract was quoted by *The Medical Record* bearing on the composition of several artificial foods, publishes a correction based upon the analyses of Professors Elwyn Waller and A. A. Breneman regarding Reed & Carnick's soluble food, to the effect that 38.26 per cent. of the albuminoids which it contains are in soluble form, that no 'hard unchanged particles of casein' were found, that the casein is partially rendered soluble by the action of the digestive ferment. That the portion of albuminoids in Liquid Peptonoids is limited only by the quantity which can be kept unchanged in solution, that 16 per cent. of alcohol is necessary to prevent decomposition of the albuminoids, and that no greater than 3 per cent. of these can be held in solution in this liquid. We publish the correction from the same source as the original quotation as an act of justice to all concerned, regretting that we, in common with our Boston contemporary, were in any manner misled by what appeared to be a well-authenticated official report."

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THOMAS F. WOOD, M. D.,
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ORIGINAL COMMUNICATIONS.

REPORT OF THE SECTION OF OBSTETRICS AND GYN- ECOLGGY.

By S. T. NICHOLSON, M.D., Chairman, Washington, N. C.

(Read before the Medical Society of the State of North Carolina,
at Fayetteville, May 8, 1888.)

*Mr. President and Gentlemen of the Medical Society of the State
of North Carolina:*

Fully appreciating the great importance of the subject for that
Section of which I have been chosen Chairman, I cannot but feel
my inability when I reflect upon its weighty responsibility.

In making up my report I shall take under consideration that most
dreaded foe of every obstetrician, viz: puerperal fever.

I think it entirely unnecessary to consume time in detailing the
earlier views upon this subject, wearying you with the oft-repeated
teachings of Hippocrates, Galen, Avicenna, Puzos, Fountaine, Bichat

and others, but shall confine myself to more recent advances and my own statistics.

All recorded statistics before the adoption of certain rules go to prove the mortality in this terrible disease to have been very large, and during epidemical outbreaks in London, Paris, Edinburgh, Berlin and other places it has been appalling, in some instances necessitated the closing of infirmaries, nearly every patient dying. I am here impressed with the truthfulness of these words of Ramsbotham: "In the whole range of scientific medicine there is no subject more difficult to treat than that of puerperal fever." Doleris positively assures us that upon repeated trials, especially after a chill, he has never failed to find micrococci in the blood of puerperal fever patients. He found the prevailing pathogenic organisms to consist of bacilli or rods, and micrococci or round bacteria, in the varieties of micrococci, simple points, diplococci, double points and chains or wreaths. The bacilli or rods he regarded as the source of acute, rapid septicæmia, while pus production was associated with the multiplication of bacteria, especially the diplococci. It has been proven by the experiments of Koch and Gutman upon animals that death may occur by the rapid absorption of a chemical poison (sepsin) developed in a putrefying fluid independently of bacteria. The anatomical demonstration of putrid intoxication in puerperal women has not yet been furnished but it is quite probable that similar cases do occur when retained coagula or portions of placenta undergo putrefaction, producing the speedy deaths sometimes observed.

Puerperal fever is, indeed, puerperal septicæmia. I believe this is generally agreed upon by modern writers. The experiments of Haussmann, D'Espine, Schuller and others demonstrate the fact that septic poisons are capable of producing the lesions ordinarily associated with puerperal fever, such as peritonitis, metritis, perimetritis phlebitis, etc., refuting the theory of the so-called "localist." Septicæmia is characterized by the invariable presence in the organ infected of those minute bodies generally termed bacteria, which possess the capacity of self-multiplication in the tissues.

It is now a settled question that the microspores of septicæmia are the sole source of infection; the experiments conducted after the methods as suggested by Koch have only been partially successful, but earlier experiments were attended with positive results.

and more recently Pasteur and Doleris have furnished confirmatory evidence.

Koch and Doleris have microscopically demonstrated the fact that the action of bacilli differs very materially in the blood from that of the round bacteria. So soon as the latter comes in contact with the red corpuscles, these corpuscles are seen to stick together and form smaller or larger clots in the blood, too large to pass through the capillary network, are arrested in the smaller vessels, where reproduction takes place, with migration to neighboring vessels and tissues; the red corpuscles undergoing rapid changes and as rapidly disappearing, bringing about an almost colorless condition of the blood. The changes produced by bacilli in the blood are quite different, the red corpuscles are not diminished in number, but undergo various stages of deformation; no sticking together or clot formation is observed, they seem to attack the white corpuscles mostly and bring about their rapid destruction; blood becoming dark in color, their presence characterized by ecchymosis, small apoplectic effusions, and by the absence of pus formation. Bacilli appear to make their transit by the blood-vessels, and not by the lymphatics (the channel through which bacteria enter)—they do it; it is thought they make their entrance into the blood-vessels by virtue of their penetrative power, very much weakening the vessels. It is very rare in puerperal fever not to find both forms present, the predominant form determining the general character of the symptoms. We must agree with Prof. Lusk and others, and admit, in the present state of our scientific knowledge, that a limited number of febrile and inflammatory diseases do occur in the puerperal state, the bacterial origin of which can be fairly questioned; cases in which certain influences are suddenly brought to bear upon the nervous system, and in turn that influence is reflected, thereby arresting (wholly or in part) the functional activity of the organs of elimination. There are also cases of great susceptibility or predisposition, when the exciting cause is only necessary for development.

As I have before stated, it has been satisfactorily proved by scientific gentlemen, and generally accepted by the profession, that the microspores of septicæmia are the sole source of infection. For the organism to become infected authorities tell us there must be a solution of continuity (which exist after every parturition) and that the germs must come in contact with the broken surface.

Dr. Playfair and others maintain the position that puerperal fever is sometimes caused by the contaminating influence of sewer gas. Tarnier holds that any such poison can enter by the lungs or digestive tract, and produce the same. Accepting these as facts, reveals as our strength the great arm of prophylaxis in adhering strictly to the rules of hygiene and the system of antisepticism.

Admitting that there are cases the bacterial origin of which can be questioned; admitting auto-infection, which was even recognized by Hippocrates, for a moment, "let us unroll the dusty pages of time," look back upon the past, when London, Paris, Edinburgh, Leeds, Lyons, Berlin, Vienna and other places were from time to time draped in mourning at the loss they sustained by the ravages of this uncontrollable terror when the great medical brain of the world was in consternation and confusion. Onward was its march, unchecked and uncontrolled by the medical science, when Semmelweis discovered and turned light upon the most prolific source of infection which is now the foundation of our present system of antiseptics in puerperal septicæmia. It may not be unprofitable to here determine what is the present actual condition of this system, and, setting aside false theories and unstable hypothesis, to ascertain its exact relation to our every-day work; for, after all, it must come to this important question: What help does antisepticism afford as a prophylaxis in puerperal septicæmia? No honest or impartial observer can fail to recognize with gratitude the magnificent results and the grand success which have attended the antiseptic system as a preventive of puerperal diseases—results which have brought about its adoption throughout the civilized portions of the earth, reducing the percentage of mortality from as high as seventy to as low as one-half of one per cent. Notwithstanding this triumphant record, we find some losing appreciation for this brilliant achievement. For details I cannot do better than refer you to a report by W. S. Playfair to the British Medical Association, an extract of which will be found in the 1st vol., 55th page, *International Journal of Surgery and Antiseptics*, entitled "Antiseptic Rulings for Monthly Nurses."

With our present knowledge we can almost say—no pathogenic organisms, no puerperal fever. Then let us use every means in our power to avoid contamination.

During seven years of private practice in the town of Washing-

ton, N. C., I have had two hundred and seven cases of parturition; of this number four had puerperal septicæmia, six had puerperal convulsions, one delivered with forceps and one craniotomy. Nothing occurred to interrupt the quiet repose and speedy recovery of both mother and child in the forceps delivery and the mother in the case of the craniotomy, nor was there any phenomenal occurrence in either of the six cases of convulsions, each case being promptly relieved by venesection, made good recoveries. The four cases of puerperal septicæmia, for convenience of description, I will give in detail.

Case 1.—I was called on the 31st July, 1885, to Mrs. M., age 26, a robust, healthy woman, and delivered her of her first child; she had, however, aborted at the sixth week, eleven months prior to this time. Nothing unnatural occurred during this labor, placenta was delivered intact by Credé's method, uterus contracted well and I left her very comfortable; upon calling the next morning, to my astonishment I found her pulse 120, temperature 102, complexion looked a little thick, but no pain or suppression of lochia. Called at 5 P. M., found her temperature 103, pulse 130, lochia partially suppressed, not offensive, little or no pain. I called at 8 A. M. next day (1st August) and found her looking worn and anxious, expressed herself as having passed a bad night, temperature $103\frac{1}{2}$, pulse 140, sick stomach, entire loss of appetite and suppression of lochia, some tympanites present, tongue thickly coated, a dirty whitish color and inclined to be dry. • These symptoms continued and gradually grew worse, temperature remaining continuously high and reaching 105° at one time, pulse grew more rapid and weaker, vomiting became persistent, uncontrollable and of a dark color, tympanites was increased, some tenderness over abdomen, strong tendency to constipation throughout, tongue became dark and dry. She died on the 4th August from exhaustion, remaining conscious to within a short time of her death.

Case 2.—Mrs. W., age 22, stout, healthy woman, of healthy parentage, she had, however, been troubled with chills and fevers six or eight weeks prior to this time. December 24th, 1886 (nearly eighteen months since Case 1) I was called and delivered her of her first child, a fine boy, at full term. It was a normal labor, placenta was expelled intact. I left her at the end of one hour doing well—uterus well contracted. I called the next morning and was shocked

to find her temperature 102, pulse 120. This case progressed in an uninterrupted course, with all the symptoms of Case 1, of the same duration, and, I am pained to say, of the same fatal termination.

My treatment in both these cases was the same. I began by first giving a laxative dose of the mild chloride mercury, after which I relied on castor oil and spirits turpentine, and later in the disease I had to rely entirely upon warm water enemata, as the stomach would not retain anything. As a sedative I gave gtt. ij of the tincture of aconite root every one to two hours; later I used tincture of digitalis gtt. x every two to three hours. Both of these tinctures were standard and I believe them genuine, but they failed to have the desired effect in both instances, neither the pulse nor temperature were reduced, though I am unable to say how much higher they might have gone, producing death sooner.

I used turpentine stupes to abdomen and intra-uterine injections night and morning for two days of a 3 per cent. solution of carbolic acid, but seeing no benefit from it, discontinued them. Vaginal injections of the same were used three or four times a day up to the day preceding death.

Warburg's tincture and quinine were given as long as the stomach would tolerate them, and afterwards quinine was given per rectum grs. xxv night and morning. Stimulants and nourishments were administered both by the mouth and rectum.

I regard these as typical cases of puerperal septicæmia, but with my closest observation in both, I failed to find anything to lead me to the belief that they were auto-genetic. I am satisfied the uterus was thoroughly emptied and well contracted; there was never at any time the least offensive discharge, and the uterine injections failed to abate the fever. The privilege of post-mortem examination was denied. As to myself as a medium I had not been in any case of puerperal septicæmia, or any case in which I was brought in contact with septic matter whatever, nor was there erysipelas, scarlet fever or diphtheria in town. As is my custom, the requisites of cleanliness and antisepsis were used; washed my hands first with soap and water, then with a carbolized wash, and used carbolized vaseline as a lubricant. In view of these facts, I fail to see any chance of contamination from me. I am therefore persuaded that that these cases must have found their origin in the atmosphere, not from sewer-gas, for there was none in communication with either

patient, but from some similar atmospheric poison; the hygienic surroundings of both patients were very poor, Case 1 occurring in a small, crowded house, situated in the lowest part of the town, during the hottest part of August. At the same time there were other cases in town, in the hands of other physicians, with which I had no connection whatever, in which death occurred within a week after delivery, the origin being very obscure. Dr. Playfair reports three fatal cases which he attributes to sewer-gas, and to establish his opinion, he states that he had similar cases, with all their severe symptoms, which, upon being removed from that locality, made immediate improvement and recovered. He also cites Frankenhauser's report of fatal cases under like circumstances.

Case 3.—Mrs. P., a well developed woman, age 25. I was called on the 15th of September, 1887, found her in second stage of labor. Her labor was hard and tedious, but she was, however, delivered in three or four hours of a very large still-born child, weighing 14 pounds. Placenta was slightly attached, post-partum hemorrhage was considerable. Satisfying myself that the uterus was thoroughly emptied and well contracted at the end of one and a half hours after delivery, temperature being 98 and pulse 76, I left to call again the next morning.

September 16, 8 A. M.—Not so much to my surprise, but greatly to my discomfort I found her temperature $101\frac{1}{2}$ and her pulse 116, complexion muddy, tongue thickly coated white, some tenderness over the abdomen. At 6 P. M. temperature $102\frac{1}{2}$, pulse 124, lochia partially suppressed. At 8 A. M. on the 17th temperature $103\frac{1}{2}$, pulse 135, sick stomach, complexion still thick and sallow, slight pains, some tympanites, lochia almost entirely suppressed, loss of appetite and strong tendency to constipation. I saw plainly the death of my patient approaching; something must be done and that quickly, or she would soon share the sad fate of the previous cases. So far I had pursued the same treatment under which they died. My experience with *veratrum viride* in the past gave me no comfort, but after serious reflection and consideration, I determined to make the following changes in my treatment: to discontinue intra-uterine injections, but continue the vaginal and to use bichloride mercury solution, 1 to 3,000, 3 or 4 times a day, instead of carbolic acid give mild chloride mercury, alternated with castor oil and spirits of turpentine as a laxative, and last, but not least, to narcotise her thoroughly. Whereupon I gave

her heroic doses of morphine and repeated them until her hurried respirations were reduced to 12 per minute, when she fell into a quiet sleep and gentle perspiration, I must say to my great joy and comfort. On calling at 9 P. M. I found her resting quietly and expressed herself as feeling better, temperature 102, pulse 120. After seeing that she was made as comfortable as possible, I gave full directions to her husband for the night and left, to return the next morning.

18th, 8 A. M.—She had spent a night of quiet and sleep, more thoroughly under the influence of narcotic, temperature 101, pulse 112, bowels had acted twice in the past 24 hours, tongue looked better, and sick stomach was relieved; discontinued aconite and it was not necessary to give any more; stopped morphine, but continued Warburg's tincture. 6 P. M.—She had felt better in the forenoon and had taken some nourishment with relish, but not feeling so well at this time, temperature 102½, pulse 124, some tympanitis, increased respirations indicated the demand for more morphine; I administered it at once.

19th, 8 A. M.—She had rested comparatively well through the night, temperature 101, pulse 114, bowels had acted once, complexion cleared up somewhat, tongue looked better and tympanites about gone. I do not think it necessary to consume time in following the details of this case through each day, suffice it to say the treatment was continued accordingly as the symptoms required, and she was convalescent in thirty days.

Case 4.—I was called to Mrs. T., multapara, age 27, a strong, healthy woman, on 22d December, 1887. I found the os thoroughly dilated; I ruptured the membranes and she gave birth, in half an hour, to a fine, well-developed child; placenta was expelled in a few minutes intact, uterus contracted well, no abnormal flow, pulse, temperature, tongue and skin were normal. She was in what I considered a first-class condition. I left her feeling satisfied she would make a good recovery. When I called the next morning to my utter astonishment I found her with a temperature of 102, pulse 120, tongue coated white, tenderness over abdomen and considerable pain.

The symptoms, course, treatment and duration, with the same favorable termination, was in every respect the same as Case 3, except that intra-uterine injections were omitted.

Now, to what shall I attribute my success in Cases 3 and 4? I cannot give time and space here to the opinions of scores of authorities for and against calomel, but I attribute a great part of my success

in these cases to that meritorious mineral. To morphine is due great credit. I appreciate the fact of the superiority of the bichloride solution over carbolic acid as an injection, and must not fail to give, to the omission of intra-uterine injections in these cases due credit. Calomel, I believe, not only serves as the most efficient laxative and germicide, but serves the good purpose of counteracting the retarded functional activity of the organs of elimination already existing and increased by the morphine, therefore doing away with the objectionable effect of the morphine. I think the intra-uterine injections should never be used unless we have good reasons to believe we are dealing with auto-infection or the temperature rises very high. By an abundance of practical experience the fact is established beyond dispute that the closest observance of the rules of hygiene and antisepsis is the only known reliance with which to mitigate the death-rate in puerperal fever. The responsibility of an accoucheur begins so soon as he is notified that his services will be expected; it then becomes his absolute duty to at once see to the sanitary surroundings of his patients, and do all in his power to perfect them, and in every case adhere strictly to the rules of the antiseptic system. It behooves us to leave nothing undone that can be done to fortify our patients against contact with contaminating influences, and when we have done all that we can do, discharged our full duty, we will enjoy a happy consciousness of the fact and be rewarded with success.

THE TREATMENT OF VALVULAR DISEASES OF THE HEART.

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This paper is intended to deal with matters connected purely with the treatment of valvular diseases of the heart. In it I desire to record some opinions formed by experience; to trace lines of procedure; to see in how far new therapeutic agents have added to our

resources; and to try to make out in what direction the hand of progress points.

Corvisart's famous quotation as a motto for his classical treatise on diseases of the heart, *Hæret lateri lethalis arundo*, represents the thought for a long time prevailing, and still largely adhered to, certainly as regards valvular affections, that nothing can be done for such grave conditions: the fatal arrow must stay implanted until death loosens it. Side by side with this opinion has been, of late years, the doctrine strongly urged that treatment should be based on the particular mischief at valves and valve openings and its supposed necessary consequences on the walls, and rules are laid down for the use or avoidance of remedies in accordance with these preconceived ideas, and with the special name the valvular disease bears. Thus, in mitral regurgitation, as well as, and even more markedly, in mitral narrowing, digitalis is to be employed to increase the propelling power of the heart; in aortic regurgitation, with its large left ventricle, this drug is to be avoided—may be even dangerous; and, as the resulting hypertrophy is mostly sufficient, digitalis is of little or no use in aortic narrowing. In tricuspid regurgitation we are taught by some never to omit its use, whatever else we do; by others, that as there is no compensatory muscular change, it is impossible that it can be of any service.

Now, from these doctrines and the suppositions on which they are based, I dissent. I think they only embody half truths, which, rigidly applied, will lead to wrong practice. I believe they ought to be taken simply as very general statements concerning the particular tendency of each valve disease, but not be the guide in an individual case without an accurate study of the special features of the case. I hold, then, that the precise valve affected is not, with our present resources, the keynote to the treatment of valvular heart disease. Much more important is it to regard the state of the muscular fibre; the size of the cavities; the condition of the arteries, veins and capillary system; the secondary results of the cardiac lesion; the control of the nervous system. Important, too, it is to bear in mind the cause of the malady. Holding these views and largely based on them, I advance these propositions for the management of cases of valvular disease of the heart. We are to take as indications:

1. The state of the heart-muscle and of the cavities.

2. The rhythm of the heart-action.
3. The condition of the arteries and veins and of the capillary system.
4. The probable length of existence of the malady, and its likely cause.
5. The general health.
6. The secondary results of the cardiac affection.

It is on these considerations that the treatment of valvular affections turns, and the first of them is, from a practical point of view, the most important. It influences action in diverse ways. Thus, if we have a case with heart-muscle which has increased in size simply to the extent necessary to overcome the difficulty made by the valvular imperfection; in which the cavities are but little stretched; in which a stronger impulse is not associated with marked apex displacement or with greatly increased transverse percussion dulness; in which the arteries do not throb inordinately, nor the veins are turgid, nor the surface mottled and the capillary circulation sluggish; in which there is no dropsy, no respiratory embarrassment; in which the general health is good, and exercise does not produce inordinate distress—we know that compensation has fairly followed injury, that heart-muscle and cavities are in, for that case, healthy condition, and should endeavor to keep them so by simply regulating the patient's life and habits. No matter by what name the valvular disease is labelled, there ought to be no interference with it by drugs, certainly not by remedies which act on the heart.

But the same patient may show excessive cardiac growth and force, and be greatly benefited by cardiac sedatives; or later he presents a halting beat of the heart, the cardiac dulness has increased, so has the impulse in extent, but not in force; there is œdematous swelling around the ankles; the veins are more prominent; lungs and liver are engaged; small vessels are visible in the skin, and are tardily emptied by pressure—the stretching, faltering heart calls for support, and is rallied, made regular, and kept for a long time performing its functions admirably, by the persistent employment of moderate doses of digitalis. Yet this is the same patient; all the while the disease bears the same name. But his treatment has been followed by such striking results because the state of the heart-muscles and of the cavity has been fully recognized, and had been made the basis of remedial interference.

Persons thus supported in their circulation may be kept alive for years and capable of leading useful lives. But this is not the main point I wish to bring out. It is chiefly that the same valvular disease will at different times, according to the varying state of heart-muscle and cavity, require very varying treatment. In truth, I have had cases come under my observation in which the active state of the circulation, the marked hypertrophy, the cardiac uneasiness were always greatly relieved by aconite, and so much aggravated by digitalis, which produced a sense of cerebral uneasiness and weight, that the patient had the greatest dread of this drug, even for temporary purposes; yet I have known such cases in time, when the heart began to weaken, owe, for years, their life to the steady use of digitalis.

The class of cases just alluded to, chronic in their course, with slowly deteriorating compensation, are, usually, those in which small doses of digitalis act so favorably. The quantity required is, indeed, rarely more than ten drops of the tincture twice daily, kept up until the effect on the heart and pulse become perceptible—which may be in a week or in several—and then suspended, to be resumed according to circumstances. Nay, I have found a single dose of ten drops, repeated once in twenty-four hours, preferably at bedtime, show the same happy results. Some patients do better with five-drop doses, every fourth or sixth hour. But the rather larger dose, at longer intervals, is usually the less disturbing plan. Should the digestive organs become deranged, I use digitalis by suppository; from two to four minims of the fluid extract incorporated in cocoa butter are efficient.

Digitalis acts in the cases under consideration chiefly as what is called a heart tonic; it makes the contractions of the cardiac muscle stronger and slower, it produces a fuller flow in the finer vessels. It answers, as already stated, in small or in very moderate doses. It is required in much larger amounts in those instances of valvular disease, comparatively rare, in which there is almost from the first dilatation and all the excessive feebleness of circulation this brings with it; or in which, late in the history of the valve affection, the dilatation has outstripped the hypertrophy. Under both these circumstances of cardiac weakness digitalis may be alternated with strychnia and supplemented by alcohol.

There is yet another cardiac condition encountered in valvular

disease, in which digitalis is the principal remedy, and in still larger doses. It is where the compensatory hypertrophy is gradually lessening in proportion to the valvular defect; where the venous system is becoming gorged, the breathing much oppressed, the internal organs congested; where the feet are beginning to swell, the pulse is rapid and compressible, and the heart often fitfully excited; it is when the symptoms become rather suddenly aggravated, and a sense of weight and distress in the cardiac region suggests that the organ does not fully empty itself, that larger doses of digitalis will show a wonderful influence. Fifteen minims of the tincture every second or third hour will not only cause the struggling organ to contract powerfully and help the general circulation, but will diminish the choked condition of the cavities, notwithstanding that up to a certain point digitalis prolongs the diastole. The action of the drug is helped by ammonia, by brandy; but while given in these large doses the patient must be kept at rest. The mischief once checked, smaller doses will again show their good effects. We may meet with the condition under discussion in any case of valvular disease; undoubtedly most often in mitral complaints, but also in advanced stages of aortic regurgitation; and, if in the latter affection, we need not be deterred, on theoretical grounds, from withholding the treatment indicated.

In the remarks just made it has been assumed that we are dealing with hearts in which the muscular fibre, however increased, is, on the whole, healthy; in other words, not in a state of degeneration. But supposing that it be; supposing that there be a granular, or a fatty, or a waxy, or a fibroid change. Is the treatment to be altered? I do not think it can be materially modified except in the rather steadier use of stimulus; yet we will not obtain the same result from digitalis or kindred agents, and arsenic or strychnia is always worthy of trial. These are difficult cases to treat and difficult cases to recognize. The age; the history, which shows a likelihood of fatty or other degeneration; the aspect of the patient, and the very fact that the heart-muscle does not seem to respond to cardiac tonics, give us a clew to the true character of the affection. Neither the sphygmograph nor the cardiograph helps us much in the recognition.

We have been considering heart complaints, and they are the most common, in which sooner or later the compensation is defective, and the heart has to be sustained. But there are cases, already alluded to, in which this never happens, in which no interference is required, in

which the patient, if patient he can be called, has a heart quite sufficient for the ordinary purposes of life. It gives him no uneasiness, and, even if aware of his cardiac malady, its existence ceases to trouble him. These are especially cases of aortic disease, narrowing or regurgitation, particularly the former, with marked, but not excessive hypertrophy. Secondary results of the cardiac affection are not seen; though, as is fully recognized, there is greater tendency to sudden death, and violent exertion must be avoided. Yet I have known persons having these aortic maladies distinguished in pursuits with constant strain; one, an officer of many campaigns; the other, a most laborious physician; the third, the captain of an athletic team at a college proud of its athletic eminence; and not one is aware of being the worse for exertion, suffering neither pain nor shortness of breath. Two have lived over twenty years since I have been cognizant of their malady; they do nothing to counteract its effect, except leading a very temperate life.

Yet another class of cases presents excessive muscular growth and cavities that have but moderately increased. This state is more often met with in aortic affections, particularly regurgitation; but it may also happen in mitral regurgitation, with or without coexisting aortic disease. The impulse is extended, forcible, and forcible out of proportion to the cardiac percussion dulness; there is often throbbing of the vessels of the neck, dull headache, tension in the pulse, and a feeling of constriction in the chest. Aconite is preëminently the remedy; it diminishes the blood pressure in the arterial system and gives great relief. I usually employ two drops of the tincture, every fourth or sixth hour, for the first few days of the treatment, and then only twice a day; or give one drop every third hour until an effect on the force of impulse and pulse is produced, and keep up this effect with a drop dose, two or three times a day, for several weeks, intermitting the treatment, and resuming it from time to time. *Veratrum viride* has similar applicability; it is, however, more apt to nauseate. But I have often had the happiest results from a combination of one-drop doses of aconite tincture with three of tincture of *veratrum viride*, and seven of tincture of ginger. It is an admirable sedative, and does not sicken.

Summing up, then, the treatment of valvular affections of the heart as they present themselves ordinarily, and basing it chiefly on the condition of the cardiac muscle and of the cavities, we find practically three groups:

Cases in which no special treatment is required.

Cases in which excessive growth and strong action call for aconite or veratrum viride.

Cases in which, either early or late, and with or without increased muscle, the heart falters and needs support, and for which digitalis, used differently according to varying indications, is the principal remedy.

The line of treatment is held to independently of the exact valve affection. It requires tact and experience to adjust it to the individual case. But when adjusted the results are excellent.

I turn now to the other points laid down at the beginning of this paper, which are to guide our therapeutics. They will not long detain us; for they are of far less importance than the one just considered. The rhythm of the heart, its regularity or irregularity, has, indeed, been already alluded to in connection with the state of the cardiac muscle and cavities. Still there are cases, especially of mitral narrowing, in which the extreme irregularity presents a striking feature, and in which the question naturally arises, whether we cannot do something special to remedy so threatening a condition. They are mostly cases with imperfect or weakening compensation, and, therefore, to be benefited by digitalis and remedies of that class. Yet, as an adjunct to this treatment, belladonna may be advantageously employed, and pushed to its constitutional effect. From belladonna alone I have not seen any marked results as a cardiac tonic; but, without depending entirely on it, I know it to be valuable for the relief of irregular action.

The condition of the arteries and veins and of the capillary system furnishes an indication for treatment which is apt to be overlooked. Attention is paid to the veins and to their turgescence in instances of dilated right heart and cardiac dropsy. But there is the equally important state of the arteries, of the arterioles and capillaries, and the appearance of the skin and the network of fine vessels in it, by which we can judge of the more minute circulation. Now, we must remember that the very remedy we use most in cardiac disease, digitalis, contracts the arteries and arterioles, and the indications are often to get with increased cardiac power a free flow in the vessels without resistance from them. It is claimed that strophanthus has this valuable property, that it is a cardiac tonic which does not also contract the blood-vessels; but this is not

proved—indeed, recent researches, such as those of Bahadurji, suggest the contrary. Still, the evidence is in favor of strophanthus contracting the vessels to a much less degree than digitalis. Nitroglycerine and the nitrites produce rapid and great dilatation of the vessels, but have, I think, very little effect on the muscular power of the heart. Belladonna and atropia in decided doses have somewhat the same action as nitroglycerine, less on the vessels, rather more on the heart. Why can we not learn to combine nitroglycerine or atropia with digitalis in right proportions, and obtain, where we so wish it, full cardiac power without resisting vessels?

There is, I am certain, a rich field here for accurate research. While waiting for an agent which by itself has the needed qualities, we can use the remedies we possess to modify each other; and in the class of cases with sluggish capillary circulation we may also make use of gentle massage.

The probable length of existence of the malady and its likely cause must be taken into account in treatment; the former, because it gives us an idea how actively the process of compensatory hypertrophy is going on, and whether it had better be stimulated or checked. Besides, it bears on the point whether the original malady is so far off that it is still worth while treating. In this respect, then, the consideration of the duration and of the cause of the valvular lesion merges.

Now, let us consider this question of cause: It is needless to repeat all the possible causes of valvular mischief; the most prominent certainly is rheumatism, next come the degenerative changes, as of advancing years, of Bright's disease. When rheumatic, can we treat it specially? My experience says distinctly not. We possess no remedies to influence the results of the rheumatic endocarditis, when the acute stage is fairly over. Indeed, if it be three months after the attack, I believe the attempt useless. Besides this, it may be worth while to try a course of iodides, of blisters, of rest. It will generally fail; but I have twice seen loud murmurs, left after rheumatism, thus disappear, and, I believe, the valve restored. When the attack dates sometime back, no good results come from attempts at absorption. I have several times watched the effects of long-continued, faithfully carried out trials. One, in the person of a middle-aged physician who was determined to get rid of a rheumatic mitral disease with a marked systolic apex murmur, and

no signs of pulmonary congestion. He kept himself saturated with iodides for a year, only stopping for short intervals, when sickened by the drug. At the end of a year the murmur was just as distinct as before, and his general health certainly not so good; the extent of hypertrophy appeared unchanged. I watched a similar case for eleven months; the result was the same. Yet it is well in instances which have clearly a rheumatic origin, to guard against the possibility of the recurrence of the rheumatism, since this may lead to an aggravation of the valve mischief; it is well at the first sign of a rheumatic outbreak, to insist on rest and to administer freely alkalies, or the salicylates. At all times, too, ought the food, the clothing, and life generally, to be regulated, as it would be in any one liable to rheumatism. The same line of thought, though not with exactly the same agents, will indicate to us how to manage the heart disease of the gouty, with the occasional appearance of large quantities of lithic acid in the urine.

With reference to athermatous disease, with its pulse so often of higher tension than the cardiac condition would indicate, we can, with our present knowledge, do nothing for the gradual decay which is going on. Acids have been suggested, but acids will not answer. Doubtless, future therapeutics will include solvents and other means to influence degenerative states, and they will be used in cardiac affections. Viewed now, we can only say that this kind of cases requires a more constant, though varied, cardiac support than the recognizable organic mischief calls for.

There is, however, a form of valvular affection of the heart in which we can treat the malady according to its cause with the happiest results; it is the form which I have called functional valvular disorder. Since the publication of my paper on the subject (*American Journal of the Medical Sciences*, July, 1869) I have had many more cases of it, and have learned to remedy the perverted valve action and its consequences in a number of instances which at first appeared to be incurable organic valvular disease. This was accomplished by rest, followed by graduated exercise, by careful diet, and by the persistent use of small doses of digitalis, or, in some later cases, of adonidine. The cases were chiefly mitral regurgitant affections; two of them distinctly followed heart strain from excessive rowing. They were not in any sense anæmic. In two in which the treatment was concluded within the last year, and

one of which had considerable pulmonary engorgement, the valve has so completely returned to its normal action that no murmur could be detected by experts who saw them subsequently.

It seems almost needless to speak of attention to the general health, as an indication for treatment, were it not that some important considerations are involved. In the first place, it is evident that the better state we keep the blood in, the better the heart-muscle will be nourished, the less likely to undergo degeneration. This is, perhaps, the reason why iron is so often thought of as a routine practice in valvular affections. Yet it is, as a rule, not a good remedy; it constipates, produces headache, a full feeling about the heart, and is badly digested. It ought only to be given in cases clearly anæmic, or after recovery from an acute malady. Food is generally much more important than iron. It should be nutritious, easily assimilated, but never taken in large quantities at a time. Strong broths, fish, eggs, meat, poultry and game, and such green vegetables and fruit as are readily digested must form the basis of the food-supply; and those who like milk, or have no distaste for digested milk, can take either in moderate amounts to advantage. There is no objection to the use of coffee and tea, if not excessive, and small quantities of alcoholic drinks are rather beneficial than otherwise in inadequate or faltering compensation. Except for gouty persons, we may hold to the axiom that it is quite right to allow alcohol in cases to which we think digitalis applicable. The light wines are well borne and apt to be of service. Champagne is bad for most patients. I have known even a single glass produce violent palpitation, cardiac distress and oppression. The dress should be loose-fitting and warm; and, owing to the readiness with which laryngeal and bronchial catarrhs arise, exposure to cold and damp should be avoided.

With reference to exercise, it is difficult to lay down rules. Of course, all violent exercise, like all sudden efforts, is to be avoided; and, in the cases with rapid circulation, I believe in considerable repose. But where the heart is not acting too violently, nor too rapidly, there is no doubt that regulated muscular exercise, especially on foot, is of use, as it sustains the nutrition of the organ. It must be kept within the limits of not producing shortness of breath, and ought not to be undertaken in the face of a strong wind. Of the hill-climbing and mountain-climbing plan of treatment, recently

advocated by Oertel, I have had no experience. What I have seen of the difficulty people with valvular heart affections have in living in mountainous regions, as in Colorado, does not incline me favorably to the plan. Keeping the nervous system as quiet as possible and being cheerful, are undoubtedly great aids in holding the cardiac malady at bay. Nervous people with valvular disease do badly; their excitement tells on the heart. Worry is even worse. Absence of worry means generally long life; worry, short life.

The sixth condition I laid down for the treatment of valvular disease relates to the secondary results of the cardiac affection. With these it may be proper to consider some special heart symptoms which are at times of unusual prominence. But the attacks of palpitation and cardiac pain; the tendency to syncope; the dyspnœa; the dropsies; the affection of the kidneys; the headache and vertigo; the insomnia; the plugs that are washed into brain, or lung, or spleen, or liver; the hepatic engorgement; the catarrhal affections of stomach and upper bowel, furnish so many morbid states that it would be impossible here to consider them or their management. I will only select for discussion a few, and try to make clear some points which I have learned by experience.

As regards palpitation in cases in which it is marked, we are often met by this difficulty, that it gives a fictitious strength to the impulse. We ask ourselves whether it would not be better to treat such cases by sedatives? Yet the pulse, though rapid, does not correspond in strength, the heart is really weak, laboring; and we shall rarely be wrong in meeting the symptoms with ammonia, with brandy, and with similar agents. Then we notice a class of cases in which palpitation is not uncommon, but in which the action of the heart is sometimes rapid, at other times slow, and is very much influenced by the least fatigue. This may happen after some illness, other than cardiac, or after mental anxiety. There is a functional cardiac disorder, superadded to the organic malady, which may, indeed, show fair compensation, and really be but slight. Great attention to the general health, with rest, will get rid of the added marked functional disturbance; and occasional doses of bromide added to digitalis, if this be not otherwise contraindicated, a course of cannabis indica, or of arsenic, will show good results. From opium, too, given in small amounts, we are apt to observe a happy influence,

In yet another class of cases we have a constant sense of cardiac uneasiness or actual pain as a striking symptom. In such the iodides usually do good, also wearing a plaster over the heart. It may be that plasters, as Lauder Brunton suggests, acts simply by pressure; but, at all events, they act. In instances in which there is decided force to the impulse, I often order aconite plasters, of half strength; in other instances, belladonna plasters; and the relief they give makes the patients very willing to repeat them. But the best of all remedies is nitroglycerine. It is most unfortunate that this valuable agent, which lessens blood pressure and diminishes the resistance the heart has to overcome, and which, therefore, ought to have so large a field of usefulness in valvular disease of the heart, is so repugnant to many patients, and produces headache so readily that it has to be discontinued. Yet those who can take it reap the benefit. I have refrained from quoting cases in detail, but I cannot forego citing two striking instances of its favorable use, and in one of long continuance of its administration :

Mr. A., seventy-one years of age, was obliged to retire from the management of a large business on account of shortness of breath and constant dull pain in the cardiac region. He was also much annoyed by dyspeptic symptoms. He presented a mitral incompetency with only slight compensatory hypertrophy; indeed, the impulse was not strong. He had used many remedies, and did not tolerate digitalis well on account of its disturbing the stomach. Drop doses of nitroglycerine, increased to two drops three times a day, removed in a few weeks the cardiac pain, stopped the intermittent action of the heart, and did the dyspnoea more good than anything else. He was able to resume his occupation, reverting to the remedy as he thought he needed it.

Mrs. E., fifty-five years of age, had a terrible record with reference to disease of the heart. Her grandfather and father had both been extremely gouty, and there was reason to think had had disease of the heart. Two sisters had died of valvular disease. She herself had had swollen feet when a young woman, and other evidences of gout. But these subsided; and, as years passed by, the large joints and the muscles troubled her, and she looked upon herself as rheumatic rather than as gouty. Yet she never had an acute attack of rheumatism. She was fond of travelling, and I did not see her at times for long periods. But five years before her death I am certain

that she had no cardiac malady; for, knowing the history of the family, I examined her with reference to this point. She went to Europe two years subsequently, and about that time began to notice that she could not go up hill without panting.

While at Hamburg, about eighteen months before her return home, she had an attack of angina, for which nitroglycerine was ordered, with relief. A subsequent and more severe seizure six months afterward at a railroad station, after some exertion, caused her to take the remedy regularly; and she soon learned that, if she persisted in its use, she had neither attacks of angina nor the steady cardiac pain from which she suffered. She kept on with the medicine, in the shape of tablets of 1-200th of a grain, twice daily, rarely oftener, for a year, stopping it only for short periods. She had mitral regurgitation with very moderate hypertrophy; tendency to pulmonary congestion and to bronchial catarrh, scanty urine with some albumen, never exceeding one-fourth of the fluid in the test-tube, sleeplessness and swelling of hands and feet. The heart was made more regular, and the dropsy speedily relieved by digitalis and acetate of potassium. Indeed, it was kept away by this, with the occasional substitution of caffeine. Under these remedies alone, however, the cardiac pain began to return; toward the close the weakening heart had to be sustained by the free use of brandy. For her oppression and miserable nights, dry cupping and Hoffmann's anodyne proved at first of service; she had, finally, to take full doses of morphia. The tablets of nitroglycerine were not abandoned until near the end. She died comatose.

One of the most important of the secondary results of the cardiac malady is the diminution of the quantity of the urine. Not nearly enough attention is paid to this point, and, unless the urine be albuminous, it is not thought to be of any service to take its state particularly into account; yet it is very valuable to do so. Scanty urine, often of higher specific gravity than normal and full of urates, will go hand in hand with cardiac pains, with headache and with dyspnoea. It is well known that the shortness of breath in valvular disease does not always receive an adequate explanation in the physical condition of the lungs. The explanation may be partly found in the concentrated condition of the urine, and, very likely, in some of its retained elements producing the disturbance in the capillaries of the lung or the respiratory centre. At all events,

from a practical point of view, we observe that diuretics, in the condition alluded to, are most valuable in relieving the pulmonary distress and the other symptoms. Of great service is caffeine, than which, indeed, there is no better diuretic in cardiac cases, especially those with weak heart and concentrated urine, and which, also, up to a certain point, has the properties of digitalis as a cardiac tonic. The dose generally sufficient is two grains of the citrate given every third hour; but it may be given in five-grain doses, or more. Caffeine itself is advantageously administered, as was, I think, first suggested by Tanret, in combination with benzoate of sodium in solution. I have found a grain of each of these drugs mixed with syrup of orange-flowers, or of orange-peel and water, each half a drachm, a good formula. Some of the new salts which are very soluble, such as the cinnamate or the phthalate, are also easily given. The former of these, as the sodio-cinnamate, contains 62 per cent. of caffeine; the latter 56 per cent., and is soluble in five parts of water. Both are adapted to hypodermic use; so is the sodio-salicylate.

Dyspeptic symptoms, due to a catarrhal condition of the stomach and bowel, are very common in valvular diseases, especially in those of the mitral and tricuspid valves. They may or may not be associated with an engorged, torpid liver; they may or may not be in the form of painful digestion. In either case the failing appetite is apt to be treated by tonics, often by iron. These are not, in my judgment, the right remedies. I believe purgatives are; they strike directly at the morbid state, and subsequently some bitter, or small doses of *nux vomica*, will restore the desire for food. Purgatives are not given as often as they ought to be in valvular disease of the heart. There is the fear of weakening the patient; which they do not, if not abused. They not only remedy the stagnation in the portal circle and remove the catarrhal condition, but they lessen the liability to dropsy. The old treatment of an occasional mercurial was good treatment; and calomel may be beneficial in other ways in disease of the heart, especially those with dropsical tendencies, than through its diuretic action, which is now receiving so much attention.

It is impossible in examining the treatment of diseases of the heart, whether of the disease itself or of its consequences, not to be struck with the important part digitalis plays. And the question naturally arises, whether any of the newer remedies can take its

place? I have tried them all, and I believe there is not one which is as trustworthy, as valuable; not one is at the same time so good a cardiac tonic and a diuretic. But undoubtedly digitalis cannot be kept up uninterruptedly, and it is apt to produce, after a time, derangement of the digestive organs. Some cannot take it at all; and as in any form of tonic, so with this cardiac tonic, we get better results by occasional change. I hold caffeine, strophanthus and adonidine to be the best substitutes. I have already spoken of caffeine. From adonidine I have witnessed, in one-tenth to one-fifth of a grain doses three times a day, some admirable results; but more in cases of functional than of valvular disease of the heart. Yet even here I have known it to act as an excellent heart regulator. So does strophanthus, which I have, moreover, often seen strikingly influence irregularity and dyspnoea. Its action is very rapid, but not so permanent as that of digitalis, and though much is claimed for it as a diuretic, its influence in this respect is inferior both to digitalis and to caffeine. It would seem specially applicable to cases with defective power and high arterial tension, as sometimes met with in the heart lesions of Bright's disease; but from actual experience I am not yet certain on this point. Convallaria has, on the whole, disappointed me in the treatment of valvular disease, though I think it is of value in palpitation of the heart and in other forms of functional disorder. Cocaine answers very well in some cases; it is certainly both a cardiac stimulant and tonic, and not devoid of diuretic powers.

A remedy which I am using now a great deal is chloride of barium. Since I became acquainted, through the investigations of Boehm and Bartholow, with its physiological action, and learned that in this it resembles digitalis, I have prescribed it repeatedly in valvular affections. I find it both a general tonic and a cardiac tonic, a remedy that increases the tone in the blood-vessels, a fairly good diuretic, and one that can be taken for a long time without disordering the stomach. It may be even, as Kobert shows, administered hypodermically. The dose in which I have given it by the mouth is one-tenth of a grain in pill, three or four times daily; a rather larger dose is, however, admissible. In very decided amounts it is apt to produce diarrhoea. As Bartholow points out, it has many incompatibles, and it is best not to give it in combination. Among its properties I have noted that it lessens cardiac pain. I learned

this from the case of an elderly gentleman with a mitral lesion, regurgitation with some narrowing and defective compensation, in whose case pain or constant cardiac uneasiness was a prominent feature. Digitalis did him in this respect no good, and was losing its effect in steadying the irregular heart. Chloride of barium in one-tenth of a grain doses improved him greatly; the oppression was relieved, the heart became more regular, the cardiac distress disappeared. He has been more than once benefited for a long time by a three weeks' course of the remedy.

I must not bring this paper to a conclusion without mentioning a point of which I know the great value—to make periodical examination of persons affected with valvular disease. I am not speaking of those in whom serious symptoms call for constant supervision; rather of those who, under our advice, take little or no medicine. In them, too, it is true that the heart of to-day may not be the heart of a month hence. Yet they are the ones chiefly in whom beginning changes can be most readily met, and whose lives, with the aid of treatment when necessary, can be greatly prolonged. Let them be made aware of the importance of skilled supervision. It will not mean needless interference; it will mean judgment as to when interference is really helpful. In valvular disease, as in other instances of disease of the heart, advance in knowledge is demonstrating how the arrow in the side can be kept from being fatal.—*American Journal of the Medical Sciences.*

THE action of antipyrin upon urinary excretion is marked. The nitrogenous elimination is greatly reduced; and this is not merely in conditions of disease, but it has been recorded by Jacobovitsch in the case of the healthy as well as of feverish children to whom antipyrin had been given. The inorganic salts, sulphates, phosphates, etc., are markedly diminished. After discontinuance of the drug, however, all these constituents appear to be increased, even relatively, to the time anterior to the administration of the drug. Metabolism seems to be held in check by antipyrin, sometimes to a remarkable extent.

SELECTED PAPERS.

SURGERY OF THE BRAIN, BASED ON THE PRINCIPLES OF CEREBRAL LOCALIZATION.

By BOSWELL PARK, A.M., M.D., Professor of Surgery, Medical Department, University of Buffalo.

BRAIN TUMORS.

The various tumors of the brain are no longer of interest solely to the clinician and the pathologist. Thanks to the researches of these gentlemen, a field of cerebral, and I may add cerebellar, surgery has been opened to us, which was a few years ago literally *terra incognita*. Prompted by the brilliant discoveries of Hitzig, Fritsch, Ferrier, and others only less well known, Macewen, Godlee, and Horsley were quick to take practical advantage of their results and to inaugurate a new era in surgical achievements—an epoch, indeed, whose remarkable results have only been surpassed by Mr. Horsley's recent successful removal of a myxoma from the spinal cord, and Macewen's somewhat similar cases.

Indeed, if you will pardon the moment's digression, so astonishing have been the advances of the past twenty years that one finds ample justification in maintaining that, with the sole exception of the science of electricity, nowhere in the whole domain of theoretical or applied science has progress been so rapid or visible results so remarkable as in surgery. So far as operative surgery is concerned, it can now rank as an exact science.

But little must here be said of brain tumors save in a purely operative sense. Their general features, which most concern the surgeon, have been well summarized in a paper read by Dr. Zenner before the Cincinnati Academy of Medicine, February 1, 1886. The principal features of a brain tumor which produces symptoms are: first, its location; second, its size; third, its character; fourth, rapidity and manner of its growth; and fifth, extent to which it affects the surrounding brain. The various ways in which a tumor may produce symptoms are: first, by increased pressure; second, by direct influence on brain tissue. When a tumor is in the cortex, the

adjoining brain gradually accommodates itself, to a certain extent, to the increasing pressure; at the base or in the neighborhood of the nerve trunks such condition is not met with in many cases. When a part of the cortex has been destroyed, another part assumes a certain portion of its function. The symptoms produced by these changes may arise either from loss of function or from irritation. Nerves may be compressed where they pass through the dura, or directly in their course, or by enlarged blood-vessels. Convulsions may occur from tumors in any part of the brain; optic neuritis is by no means common. The chief localizing symptoms are paralysis of the cranial nerves, hemiplegia, monoplegia, hemianæsthesia, partial spasms, reeling gait, aphasia and hemiopia. In the frontal lobes, the corpora striata and the optic thalami, brain tumors are frequently latent. When an individual suffers from constant headache that is not relieved by ordinary methods of treatment, he should be examined for brain tumor. Wernicke has suggested an operative procedure in cases where removal is not to be thought of, namely, tapping the ventricles in order to relieve intracranial pressure. This may be of value in rare or unusual cases. Tumors in the posterior fossæ of the skull usually cause a large accumulation of fluid in the ventricles. The distended third ventricle presses downward on the optic chiasm and produces optic-nerve atrophy; these are the cases in which blindness appears early—in other words, atrophy of these nerves is usually the result of a tumor in the posterior fossæ of the skull, generally in the cerebellum.

Considered in their surgical relations, we may, with Bergmann, divide brain tumors into (*a*) the circumscribed (encapsulated); (*b*) the infiltrated (diffuse), around which, as a rule, there is a zone of softening.

The former displace the brain substance, the latter destroy and supplant it. The former may be enucleated, the latter not. In order to remove the latter, one must remove a wide margin of surrounding tissue, as in removal of similar growths in other parts, or he must make total ablation, which is only possible in two places—the frontal and occipital extremities. Obviously these limitations reduce at once the number of cases suitable for operation.

Yet another class of neoplasms deserves at least mention here, i. e., those growing from the interior of the cranium. These by pressure may give rise to meningeal irritation or pressure symptoms, or both.

Providing that a reasonably satisfactory diagnosis can be made, it must be indeed an extensive growth from the cranial vault which shall contraindicate operation. It is not so uncommon an event at present to see large areas of the bony covering of the brain removed for the extirpation of neoplasms involving them or the membranes, and pressing on the brain. Gussenbauer has removed half the frontal bone with a little of the great wing of the sphenoid and the squamous, recovery following without disturbance of any kind. Macewen has done nearly the same thing. Langenbeck and Bergmann have excised large pieces of the dura, and the latter, as well as Küster, not only has done this, but has removed a portion of the superior longitudinal sinus. No hesitation need then be felt in attacking any such lesion so long as the general condition of the patient may warrant it.

But supposing the case of a tumor in or near the cortex, we are, if possible, to learn yet more about it. It should not be a diffuse growth surrounded by a zone of degenerated tissue, nor should it be too large or extensive. These tumors are not always so constituted that they are easy of recognition, even after exposing the brain. Unfortunately, diagnosis as regards one of these features is as difficult as concerning the other. Bergmann says that when amidst slight and late brain symptoms signs of increased intracranial pressure quickly develop, the probability is that we have to do with an infiltrated tumor. Tumors growing from the skull can be estimated with perhaps a little more exactitude, although these penetrate a considerable distance, even over motor areas, before they occasion great disturbance.

Considering the uncertainties of diagnosis, some would think it advisable before removing a large area of bone to make an exploratory opening with the trephine, and even an exploratory incision down to the white matter. Such a procedure would be quite in accord with the principles laid down in the beginning of this paper when advising more frequent exploratory operations. No harm is likely to be done by the preliminary operation, and a clear indication to abstain, thus gained, will often be more satisfactory than the uncertainty which must otherwise surround the case.

According to Jastrowitz (*Deutsche med. Wochenschrift*, No. 11, 1888, p. 209), one should only undertake to extirpate those tumors which are peripherally situated, and in respect to which it can be deter-

mined that they are non-multiple, not too large, not infiltrated, and not located in vital parts. Still, if we are to be confined too strictly to this dictum it will prevent us from removing as large tumors as Durante has already shown us we can extirpate successfully, and it will hinder us from trying to imitate Weir's success in removing an infiltrating tumor with two adjoining secondary growths.

WHAT AND HOW MANY BRAIN TUMORS ARE ACCESSIBLE?

The best answer to this question has been given by Hale White ("Guy's Hosp. Rep.," 1886, p. 117). He carefully studied the records of 100 brain tumors found in the dead-house of Guy's from 1872-'84, with particular respect to possibility of operation. According to the records, 1 brain tumor was found in every 59 autopsies.

Of the 100 studied, 45 were of tuberculous nature, 24 gliomas, 10 sarcomas other than glioma, 2 glio sarcomas, 5 carcinomas, 4 cysts, 1 lymphoma, 1 myxoma, 5 gummata, 3 undetermined—total, 100.

Bergmann has carefully gone over White's researches, and concludes that all the tuberculous and gummatous neoplasms must be excluded from consideration in an operative sense. Brain tuberculosis is almost impossible of diagnosis and has always occasioned most unfavorable prognosis, but this he hopes modern surgery may make brighter. Nevertheless, as these tuberculous masses consist almost always of caseous material, it would be most difficult to extirpate them from the soft tissue in which they lie imbedded with any such completeness as is indicated. An operation would in such a case be necessarily incomplete, and return would quickly take place, with, in all probability, tuberculous meningitis. In all of White's 45 tuberculous cases some other organ was affected, usually several others. In only three of them could operation have offered any prospect of success; but in one of these, with a tuberculous mass on the median side of the left hemisphere, there was tuberculosis also of the peritonæum and Fallopian tube; in the second, with a nodule near the fissure of Rolando, there was infection of lungs and intestines; and in the third, with a focus in the left side of the cerebellum, there was similar disease in the mesenteric glands.

Judging from these cases, it is extremely rare that cerebral tubercle will be considered amenable to surgical help, even could it be exactly diagnosticated. Bergmann considers it impossible that the cases reported by Macewen—one as a successful removal of a caseous

nodule from the ascending frontal convolution, and the other as a successful evacuation of a tuberculous cyst (*Lancet*, 1885, i, 881, 934)—were cases of genuine tuberculosis; in his estimation they were distinctly syphilitic, and should have been treated with anti-specific remedies. Thus far the only genuine and undoubted case is the brilliant one of Horsley, who removed a tuberculous mass from the right cortex of a young man of twenty. Brain syphilis is, in Bergmann's opinion, to be treated with drugs rather than by instruments.

Of the 36 sarcomas included in White's studies, 15 were diffuse and widely infiltrated, and 14 were utterly inaccessible. Only in 4 could operation have effected any good. In one of these the tumor was in the middle line of the cerebellum; in the second it sprang from the dura and pressed on the cerebellum; in the third its site was the frontal lobe; and in the fourth the occipital. Two of the 3 undetermined tumors were operable; 1 lay in the left lobe of the cerebellum, the other, of dural origin, invaded the right hemisphere.

Of the 4 cysts, two were multiple and 1 was complicated with a cancer on the neck and was accidentally discovered; the fourth might have been easily removed, since it lay isolated in the cerebellum. So, too, might the myxoma have been attacked, since it was quite superficial.

In brief, of White's 100 tumors only 9 have been removed, namely, 1 tuberculous nodule, 4 sarcomas, 2 undetermined tumors, 1 cyst and 1 myxoma. In other words, 9 per cent. could have been attacked, *providing* a fairly accurate diagnosis had been made. *Ante-mortem* diagnosis, however, and anatomical diagnosis are two very different feats. Of the above mentioned 9, 5 were located in the cerebellum, 1 in the frontal lobe, and 1 in the extremity of the occipital. It is very doubtful if these seven could have been recognized accurately enough during life to have justified attack, while the myxoma was impossible of diagnosis. We are then narrowed down to 1 tumor out of the 100 which was susceptible of both exact localization and extirpation, even when looked at in the light of the acquirements of to-day. This is not a very favorable showing, to be sure, and is to be accepted only for what it is worth. If it has any very striking bearing I should regard it as only another argument in favor of tentative exploration.

THE OPERATION FOR INTRACRANIAL TUMOR.

With regard to the technique of operations on the cranial contents, Mr. Horsley has left but little to be added to the admirable remarks which he has published in the *British Medical Journal*, October 9, 1886, p. 670, and in the same journal for April 23, 1887, p. 863. To these papers of his the reader and the student of the subject should certainly be referred, and the writer will make no effort to copy his observations in detail. Nevertheless, owing to the extreme importance of the subject and the general interest in it, a brief rehearsal of the most important points in operative technique will not be out of place here.

Preparation of the Patient.—The patient's head should be shaved two or three days before the operation and carefully washed with green soap and ether, or a mixture of ether and turpentine. From that time the vault of the skull should be kept enveloped in a moist antiseptic compress. In this connection it is worth while to add just here that Dr. Keen has called attention to the utility of shaving the scalp in every case of suspected intracranial lesion, since in two cases he found scars after shaving which were previously unnoticeable.

Aside from this, the usual preparatory treatment suitable for all severe operations should be adopted. The anæsthetic should be chloroform, unless some peculiar feature about the case makes it unwise. Chloroform is known to have a contracting influence on the vessels of the brain; hence its efficiency in these cases. Mr. Horsley has suggested and advised hypodermic administration of morphine previous to operation, with a view of also profiting by its contracting the cerebral vessels. Dr. Keen has resorted to ergot for the same purpose. To the writer it would seem that a combination of the two might be preferable to either alone. In case the patient was already so unconscious that no anæsthetic was needed, the hypodermic use of ergot would amply meet the indication. The lesion should be located as accurately as possible by the methods spoken of in another part of this paper. The writer would suggest the driving of a small, disinfected, headless tack through the scalp into the skull over the center of the area previously located. After dissection of the external flap, this track will serve to point out accurately the portion to be first attacked.

Another point in operative technique. In order to prevent hæmorrhage from the scalp during the superficial explorations, an elastic bandage may be tightly tied around the skull for as long a time as may be required. The question might also be raised whether in some very extensive operations of this kind it would not be justifiable to put into practice that which Senn has shown can be successfully done upon dogs, namely, the isolation of the trachea and the application of a rubber bandage back of it around the whole of the neck. By this procedure he found that the most extensive operations could be done upon the brain or skull as bloodlessly as they are now done upon the extremities.

The styptic properties of cocaine solutions have led Keen and others to resort to them as hæmostatics in brain surgery. Experience must yet show their real value, but they are well worthy of a trial. We are not yet in position to say whether their secondary relaxing effects upon the vessels will lead to any unpleasant disturbance or hæmorrhage. For my own part I have also repeatedly seen benefit from the application of antipyrine solutions on account of its styptic properties. Antipyrine is not only a good hæmostatic, but has some antiseptic properties. It is possible, therefore, that a spray of a one-to-forty antipyrine solution, directed upon the exposed brain tissue, would prove of considerable benefit. In order to test this matter, I have anæsthetized animals, and, after extensively uncovering the brain, have cut into it in various directions, and, after causing a free hæmorrhage, have directed upon the part a spray of 3 per cent. antipyrine watery solution. Invariably I have seen almost instantaneous evidence of its styptic virtues, and should not hesitate to use it at any time in operating on the human brain.

The old method of beginning the operation was to make crossed incisions. The raising of a semilunar flap, or one of horse-shoe shape, is much superior. This flap should have its apex in such a position that, as the patient lies upon his back, drainage may be made by mere force of gravity. There is an advantage also in raising the periosteum with the flap of the skull. While the Lister carbolic spray is not now often used, still most authorities agree that in theory and in practice it is safer to do these operations under the spray, although there may be no objection to using any other antiseptic, such as hydronaphthol, instead of the carbolic acid. In fact, it seems to me far preferable.

With regard to the methods of perforating the bone, the English and Continental surgeons differ. The former prefer usually the trephine and cutting bone forceps; the latter, the hammer and chisel. American surgeons for the most apart agree in practice with the former, and the writer, for his own part, cannot avoid the conclusion that the first exploration, at least, can be made more readily with the trephine than in any other way. Those whose facilities permit the use of the surgical engine will find it to be an admirable adjunct to cranial surgery.

WHAT SHALL BE DONE WITH THE PIECES OF BONE REMOVED?

Since Macewen has taught us how to save these fragments and restore them to place, the method has been widely tried and generally commended, and it is now the proper thing to put all pieces of bone thus removed at once into a warm antiseptic compress to be utilized at the close of the operation. Spitzka, among others, has paid particular attention to this technical point. At an autopsy three months after operation he found the reinserted button of bone in part firmly reunited; it was raised above the surrounding level, but the inner contour of the calvaria was restored, and the dura was not adherent. He concludes that buttons of bone, aseptically reimplanted, may, at least in young persons, become reunited to the calvaria, and that, even in the event of failure of bony union, they are perfectly harmless. He regards it as very essential that they be replaced, and illustrates this by a case-record to the point (*Trans. of the Am. Neurol. Assoc.*, 1887, p. 22).

Dr. Mills deems it inadvisable to reinsert large or irregular areas of bone, or those with very irregular edges or inner surface, until they have been smoothed off. But, as we know, whenever it may be unwise to restore an integral portion of the bone it may be chipped into minute pieces, and these strewn over the external surface of the dura before laying the skin-flap in place.

Dr. Dercum has, furthermore, called attention to the inadvisability of preserving fragments of bone in a bichloride solution for so long a time as might be necessary in certain cases, and he thinks, most wisely, that the risk of long-continued immersion would be greatly diminished by keeping them in fresh blood-serum, or in the physiologist's salt solution (7.5 *pro mille*) (*Polyclinic*, June, 1888).

Treatment of the Dura Mater.—This should be incised, accord-

ing to Horsley, around four-fifths of the circumference of the area exposed, at a distance of an eighth of an inch from the edge of the bone, so that it may be afterward conveniently stitched. Arterial branches running in its substance may have to be severed, but may be easily secured. Portions of this membrane which adhere to underlying tumors are usually considerably altered. If the case is of recent origin, the dura will be found highly vascular; in advanced cases it may be yellowish, and in some instances, on separation from the growth beneath, it is found to be of a dirty-reddish color. Whenever adherent, it should be freely excised. After division of the dura, one must first look for protrusion of the brain. Horsley maintains that marked protrusion of the dura indicates pathological intracranial tension, obviously a sign of great importance. Next, the color of the brain should be observed. It will be remembered that the cerebellum has normally a different appearance from that of the cerebral cortex. In the latter, it is said that the existence of a yellowish tinge or a pink lividity indicate the existence of a tumor beneath. In the light of some pathological experiences of his own, Jastrowitz advises us to trust to the sense of touch, when in doubt, rather than to that of sight, in estimating the condition of the brain after exposure (*Deutsche med. Woch.*, No. 11, 1888, p. 210).

It has more than once happened that, even after careful exposure of the brain according to the best rules of localization, uncertainty has arisen as to which convolution was the desired one. In such cases the battery has been applied, by Horsley, Keen and Deaver, with satisfactory results. It will therefore always be well to have this adjuvant at hand.

The condition of the vessels must be observed, note being taken of yellowish-white patches in the perivascular lymphatics, which are indicative of old mischief. Next, a species of manipulation should be practiced in order to detect either fluctuation or an increased resistance denoting a tumor; nothing being found upon the surface and no tension being discovered indicative of deeper lesion, further exploration can be conducted with a small aspirating needle, or with a probe or grooved director. The general harmlessness of the introduction of a small hollow needle into the brain has been clearly demonstrated already.

FURTHER INVESTIGATIONS.

If the symptoms have been sufficiently grave to call for so much exploration, it is not likely that the careful separation of the convolutions with the rounded point of the probe, or even the pushing of the same through the layers of the cortex, will give rise to any serious disturbance, while the needle or the probe may reveal the presence of pus, or, by the increased resistance offered by a tumor, may indicate its presence.

Should a tumor present or be discovered, the method of its removal will depend somewhat on its depth and character. Incisions for the removal of tumors should be made perpendicularly to the surface of the brain, both because bleeding can be more readily controlled and because, by these vertical cuts, the paths taken by the fibres of the cortex to the internal capsule are divided to the smallest possible extent; in other words, all incisions should be directed into the corona radiata. When it is possible, a portion of each motor center should be allowed to remain, so that absolute paralysis of a given part may be prevented, so far as this can prevent it, since total destruction or ablation commonly means absolute loss of motor power for all time in the part supplied therefrom.

Removal of a layer of cortex, whether normal or abnormal, does not leave, as might be supposed, a prominent gap with vertical sides, for in a short time the most depressed portion is made to bulge almost to the level of the intact parts surrounding. In addition, the cut edges are also slightly everted, and if less brain is removed than bone, these are extruded into the opening in the skull; thus, owing to mechanical arrangements, there is a continual normal tendency to hernia cerebri. But Bergmann and others have shown that the tendency to hernia cerebri is in inverse ratio to the area of bone removed, so that there is the greatest danger of hernia when but a small trephine opening has been made. As experience has extended in these cases, we are taught that it is to the best interest of the patient to remove brain tissue to an extent greater than was at first supposed—that is, one should go as wide of lesion in the brain as he would of the apparent border of the ulcer in excising a cancer of the lip. Bergmann and Horsley have also made plain that which was not previously generally appreciated—that in all operations for epilepsy of traumatic origin the portions of the cortex nearest the evident lesion should be freely removed.

Drainage.—The question of drainage must be decided by the circumstances attending each case. An abscess must plainly be drained so long as pus is discharged, but the wound or cavity left after antiseptic removal of a tumor should hardly ever, if ever, be drained for more than twenty-four or forty-eight hours, and this draining may be effected by rubber tubing or strands of horse-hair or catgut.

Closure of the Wound.—All hæmorrhage must first be checked; suitable drainage is then provided for, according to the necessities of the case. We wish, so far as possible, to obtain primary union; also to make sufficient pressure upon the brain to check tendency to protrusion. During the first twenty-four hours there is usually a slight or continuous oozing of blood and serous fluid from the fresh surfaces, but in all save abscess-cases the drainage-tube may be removed on the succeeding day, and the wound dressed with a certain amount of pressure over the flap. Any exudation that subsequently collects in the cavity or over it will thus be retained, and may give rise to some pain in the wound, with apparent distension, so long as pressure remains. Symptoms from this are not severe. The wound may be left with confidence that the fluid will be reabsorbed in due time, and that pressure will be the best check to protrusion. In case the primary union be broken up by this pressure, it may be regarded as simply a safety-valve action; otherwise the increased pressure will merely compel the lymphatics to more rapid absorption. According to Horsley, the cavity is gradually filled with a delicate pink, spongy connective tissue, whose meshes contain this fluid, which forms a plaster barrier between the scalp and the brain, and which subsequently separates the brain from its environment by a cushion of soft, normal connective tissue. Fine catgut should be used for closing the dural wound, and catgut or silk, as may be necessary, for the scalp.

HOW MUCH BRAIN MAY BE REMOVED?

As a study of the numerous recorded cases will show, we know scarcely any limit as to the amount of either brain or bone that may be removed. Certainly we can unroof large areas of the brain, including ten or a dozen square inches, if need be, feeling confident, from the assurance given by many surgeons, that the larger the opening the less the danger of hernia cerebri. So, too, with the

brain itself. Spitzka and others maintain that, if in animals, so long as the *brain axis* is not interfered with, life may go on undisturbed, we have not yet reached the limit of what may be accomplished in man, since he has removed the brain in dogs to an extent which a few years ago would have been deemed incredible.

DANGERS OF OPERATION.

In considering the main sources of danger to a patient after removal of a brain tumor, we must perhaps first mention any lack of, or failure in, aseptic precautions. If any operation seems to call loudly for such measures it is such a one as this. The records of the past are full of the fatal results of such omissions; and yet we meet, just here, with facts which constitute a strange anomaly. We know too well the danger attending the entrance, ordinarily, of foreign or septic material beneath or even in the scalp. Still Spitzka assures us that he has deliberately injected a drachm of the foulest street mud he could procure into the thalamus after trephining. The dog recovered without untoward symptoms. In the arachnoid of the ponto-chiasmal lamina two large masses of dirt were found after the dog had been subsequently killed; a third portion of it was found in the arachnoid lamella on the basilar surface of the oblongata (*Trans. of the Amer. Neurol. Assoc.*, 1887). His general inference from experiments is that the oftener a dog's brain or dural spaces are insulted by the insertion of different or virulent substances, the greater becomes their resisting power to injurious agencies such as prove fatal to an animal operated on for the first time. In other words, that final immunity is gained by repeated attacks. Let us, notwithstanding, not judge from these interesting experiments that we can afford to disregard any precaution which the best practices of the day afford.

But the principal immediate dangers are two, i. e., hæmorrhage and œdema.

Hæmorrhage.—When the pia is cut, its vessels may bleed freely, so that ligature or its equivalent may be demanded. The brain substance is not likely to give rise to alarm on this account. But that disastrous hæmorrhage from unexpected sources may occur is a lesson we may learn from Birdsall and Weir's case; here two bleeding points were discovered—one from near the straight sinus, probably belonging to the pedicle of the growth, the other probably

a terminal branch of the posterior cerebral artery. Direct pressure checked their flow and the cavity was filled with iodoform gauze. Nevertheless, oozing continued and the man died of loss of blood nine hours later.

Dr. Keen found in one of his cases that the vessels were so friable that if one end of the catgut ligature were pulled harder than the other the vessel would be cut through; hence absolute equality of traction may be essential.

Bergmann advises, as a rule, to tie arterial stems of appreciable size, and condemns the tampon if it can be avoided. In the brain one may ordinarily cut to a depth of four centimetres before an artery spurts—before there is even more than an oozing; but when such a branch as one from the posterior cerebral on the basal surface of the occipital lobe is cut, experience shows that it must be secured. When necessary one may do as he did in one case: tampon the cavity with iodoform gauze, and make secondary suture of the flap forty-eight hours later if need be. After inserting the tampon the dural and skin-flaps are laid over it and an absorbent dressing applied over all. This tampon must be a rolled-up wad of gauze, covered by as many more as may be needed, till the level of the skin be reached. It thus effects *compression* and *drainage*, and is much better than an inefficient plugging with a strip packed down in the ordinary manner. The subsequent removal of all this, with secondary suture of the flap, may require a repetition of the anæsthetic (chloroform), but this is much preferable to a failure by other methods.

Spitzka speaks of the danger of hæmorrhage beneath the button of bone from too sudden relief of counter-pressure made to repress any tendency to hernia cerebri; also of the danger in exposure of large brain areas in old persons with feeble vascular walls, from relief of pressure upon the intracerebral vessels—practical points worth noting.

On the other hand, Jastrowitz raises the question whether in some cases of cerebral hæmorrhage we ought not to trephine simply for relief of intracranial pressure in order that absorption may more easily take place. He shows that in most cases of brain tumor the *pressure* is a much more serious factor in the fatal result than any other element. Fifty years ago Magendie made experimentally cerebral hæmorrhages in animals, and after they were comatose and paralyzed he quickly opened their skulls, after which they recovered consciousness and part at least of their muscular power.

A second danger is that of *acute brain œdema*. This led to the loss of one of Bergmann's patients five days after operation. This sudden transudation, which perhaps is an exaggeration of the process by which the cerebro-spinal fluid is produced, may be brought about in two ways—either by increase of intra-arterial pressure or by obstruction of the venous channels of escape. Production of the normal fluid seems to be in proportion to the former; obstruction to venous return must be followed by similar obstruction to lymphatic return. Under this accumulation, however brought about, the brain becomes more sodden. Removal of a portion of the cranium is in effect a diminution of the pressure normally exercised on its contents. Such relief of pressure is here, as elsewhere, often followed by a reaction with production of excess of fluid. Magendie's often-repeated experiment, showing how rapidly the cerebro-spinal fluid may be reformed after it has been freely drained off, is here very instructive.

Danger of œdema is probably greater after temporary diminution of blood-pressure as a result of considerable loss of blood and through interruption of the venous blood-stream. In large intracranial tumors there is an increase of fluid particularly in the brain cavities—an increase which, after the onset of typical pressure signs, finds its expression in choked disc. It is well known how pressure upon the vena magna Galeni leads to *hydrops ventriculorum*. If there be added to these conditions of such profuse substitution of fluid yet others which increase production and limit escape—such as the effect of an operation—then one may understand how œdema may quickly supervene or be rapidly increased if already present.

When a fatal brain tumor has produced severe pressure symptoms like stupor or coma, one may surely rely on finding marked œdema at the autopsy. And since this œdematous condition is rather likely to be increased by operation, it is not strange that it should prove fatal within six or twelve hours.

RESULTS.

In closing this brief casuistic there remains to be considered only the important feature of results. These I have thought best to present in tabular form. From this table I have excluded every case in which the operation was not dictated alone by a study of its phenomena relating to the nervous system. I have omitted all trephinations for recent hæmorrhage, since these are not founded primarily on the prin-

ciples of localization in our present acceptance of that term; also all operations for epilepsy or insanity or other trouble, when the operation has been apparently performed on account of external scars or on generalized principles. Every recent case of "primary operation" has been omitted. A very large number of cases is thus excluded—cases which have a deep interest and significance of their own, and yet which are not strictly germane to our subject this evening.—*New York Medical Journal*.

PUERPERAL ANÆMIA, AND ITS TREATMENT WITH ARSENIC.

By WILLIAM OSLER, M.D., Professor of Clinical Medicine in the University of Pennsylvania.

The first article on pernicious or essential anæmia contributed to literature was by Dr. Walter Channing, of Harvard, who, in the *New England Quarterly Journal* for 1842, published an article with the title, "Notes on Anhæmia, particularly in connection with the Puerperal State, and with Functional Diseases of the Uterus, with Cases." This was a year before Addison, as stated by Stephen Mackenzie, had first publicly taught the existence of idiopathic anæmia.

In 1853 Lebert described cases of what he called "puerperal chlorosis." In the second volume of *Archiv für Gynäkologie* Gussenow described similar cases, and his paper, with that of Biermer's, which appeared about the same time, 1872, aroused a deep interest in this subject.

The importance of this etiological factor in pernicious anæmia is shown by the fact that of 91 observations collected by Eichborst, the symptoms in 29 cases developed in connection with pregnancy; of these 19 occurred during the pregnant state and 10 after delivery.

Of 21 cases of pernicious anæmia of which I have notes, 9 were in women, in 5 of whom the condition developed post-partum. Of these cases 3 recovered; of 1 I am doubtful, as the patient removed to a distance and has not since been heard from; the fifth case I have here given in full, as illustrative of certain important points in connection with the treatment of this condition.

Amelia T., aged 35, domestic, was admitted to the medical wards of

Philadelphia Hospital on 25th of February, 1888. Nothing of note in family or previous personal history. In October, 1887, she was confined of her fourth child—easy delivery. She was well through her pregnancy, but in last month had suffered with bleeding piles. She was up and about two weeks after delivery, nursed the baby, but was very pale and weak. She was discharged in about six weeks. She never regained color after her confinement, and had many spells of fainting, once or twice having fallen in the street. After January 1st this condition grew worse, and diarrhœa set in. When admitted she was in a condition of profound anæmia, and had severe diarrhœa, with irregular fever. She was placed on tr. perchl. fe, gtt. 20, t.i.d. She remained in bed and had not improved; and when I saw her first, on 17th April, she was in the following condition:

Profound anæmia; face and general cutaneous surface has slight subicteroid hue; fat is fairly well retained, though the arms look thin, conjunctivæ pearly, tongue extremely blanched. She is unable to sit up on account of the fainting. Has three or four movements of the bowels daily. Pulse 120°, small, jerky. Peripheral veins not very full. Apex beat of heart at fourth interspace; visible pulsation in subclavians and carotids. There is a rough thrill with first sound. Cardiac dulness from lower border third rib. On auscultation both sounds heard at apex with much echo; loud systolic murmur, propagated to axilla; also heard very plainly along left sternal border. Distinct systolic murmur at aortic cartilage. Second sound much accentuated.

Lungs normal. No enlargement of spleen or liver. Tenderness on pressure over abdomen. Glands are not enlarged. Fever range of 2 or 3 degrees daily. Blood very watery; red corpuscles per cu.mm. 1,170,000; percentage white to red, 1:484; color by Gowers' hæmoglobmometer, about 15–18 per cent.; corpuscles extremely irregular in size and shape; considerable proportion of larger ones are oval. There are many microcytes. Several nucleated red blood corpuscles were seen.

She was ordered Fowler's solution, 5 minims t.i.d. for a week, and then to increase 1 drop each day until ten minims were reached; opium suppositories for the diarrhœa, and in a few days enemata of dried blood. Blood-count on April 26th, 1,480,000; color percentage 20. She took the arsenic well; began to improve in color, and on

May 19th blood-count by Dr. Henry was as follows: Red corpuscles, 2,890,000; hæmoglobin, 40 per cent.

Patient improved rapidly through the summer, the diarrhœa stopped and she gained greatly in weight. When I went on duty, September 3d, I did not recognize the patient, now a large, robust-looking woman, with excellent color. The apex systolic murmur persists.

We have in this case a history very similar to that which is met with in the majority of instances of post-partum anæmia. It is interesting to note that the patient, prior to delivery, had suffered with hemorrhoids, and had lost from this source considerable blood. She never regained her color after confinement, but remained very pale, and after discharge from the hospital she had many fainting spells. The condition in which I found her was extremely grave. She could not sit up in bed without fainting; and she had constant vomiting, with uncontrollable diarrhœa. I did not expect her to recover. The blood condition was typical as regards the appearance of the corpuscles. The percentage of coloring matter was, however, reduced proportionally to the corpuscles. Indeed, the individual value of the corpuscles in hæmoglobin was rather below par. In the majority of instances or pernicious anæmia the reverse holds good.

The case illustrates an important point in the treatment of profound anæmia. This patient had received 20 drops of the tincture of perchloride of iron three times a day, from February 25th to April 17th. Her diet had been carefully regulated, and every possible means employed to check the diarrhœa and vomiting.

Fowler's solution was begun with five minim doses three times a day, and for a time was well borne. The dose was gradually increased, and the improvement was rapid. On several occasions the sickness of the stomach was aggravated, and the medicine was interrupted for a week.

By the 19th of May she was able to sit up in bed, her appetite began to improve, the corpuscles had more than doubled in number per cubic millimetre, the hæmoglobin had risen from 15 to 40 per cent. Rectal injections of dried blood were, for a time, employed, but had to be stopped on account of the irritation they produced.

I did not see this patient from the end of May until I went on duty September 3d, at which time I did not recognize her. She had grown stout, her color was excellent, and she looked in robust health. The patient's recovery may be attributed to the arsenic, and I believe that

if the iron had been continued she would have failed progressively, as she did during the six or seven weeks in which it had been administered.

This is by no means a unique history. To Bramwell, of Edinburgh, the profession is indebted for pointing out the almost specific action of this drug in certain cases of pernicious anæmia.

The statistics collected by Padley a few years ago show 48 cases treated without arsenic, of which 42 died. Of 22 cases treated with arsenic 16 recovered, 4 died and 2 improved.

Within the past few years numerous observations have shown the powerful effect of arsenic in certain cases. Unfortunately, we do not yet fully understand why, in some instances, the drug should be well borne and prove successful, while in others the patient continues in the progressively downward course.

That the cases which we group as pernicious anæmia are very varied, is now recognized by every writer on the subject. It is not to be expected that when the gastric tubules are atrophied arsenic can be curative. We need a careful study of those instances in which the drug has proved successful and of those in which it has failed.

To judge from therapeutic test alone, there must be a very deep-seated difference between the two classes.

I know of nothing more remarkable in practical therapeutics, nothing so resembling specific action (unless we except iron in chlorosis and quinine in ague) than the rapid recovery of profound anæmia under this drug. As a rule it is well borne, and should be given, as Bramwell advises, in increasing doses, beginning with 5 minims, and rising gradually to 20 or 30 three times a day.

Puffiness of the eyelids, œdema above the eyebrows, vomiting or diarrhœa, indicate that the drug should be suspended for a time, or the dose reduced. It is interesting to note that the existence of vomiting or diarrhœa does not, however, contraindicate the employment of the medicine, as in the case here reported. These symptoms seemed to improve, for a time at least, when the arsenic was first given.

If the Fowler's solution disagrees, arsenious acid may be tried. I have known it to be well borne when the liquor arsenicalis disturbed the stomach. The drug may be given hypodermically, but in these instances of profound anæmia the tendency to hæmorrhage is so

marked that the punctures may become hæmorrhagic. I have known considerable subcutaneous extravasation follow an injection. The point of the greatest importance is the fact that the medicine must be given in increasing doses and for prolonged periods.

I find practitioners express great surprise when they hear of doses of Fowler's solution, of 15, 20 and 25 drops three times a day. There is, I think, but one rule in the matter: give the drug cautiously until physiological effects are produced. The tolerance of the system for arsenic is well known. I have never seen serious consequences from its careful administration. Young persons, as a rule, take it better than adults. In an instance of pernicious anæmia, which I reported a few years ago, the patient took 20 minims of Fowler's solution three times a day for weeks, with the most satisfactory results.

In post-partum cases recovery is always slow. It may be many months before perfect health is restored. It is well to intermit arsenic for a few weeks, but the drug should be given at intervals for many months, even when the health is apparently re-established, as there is a well-recognized tendency in these cases to relapse.—*Boston Medical and Surgical Journal*,


DEATH OF THE LARGEST WOMAN IN THE WORLD.—There died at Baltimore, on September 4th, a colored woman who weighed, it is stated, eight hundred and fifty pounds. If the figures are correct, the deceased was, in a physical sense, the greatest woman in the world, if not the greatest that ever lived. Even the famous Daniel Lambert only reached the comparatively ordinary weight of seven hundred and thirty pounds. We have no record of any man exceeding the supreme obesity of the Baltimore lady, with one exception. In the year 1798 the modest State of North Carolina became the birthplace of Mr. Miles Darden, who, in the course of years, reached the height of seven feet six inches, and the weight of over one thousand pounds. North Carolina has shown pride in her agricultural and political resources, but she has really never done historical justice to the Darden half-ton of obese humanity.—*Med. Record*.

EDITORIAL.

THE NORTH CAROLINA MEDICAL JOURNAL.

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THOMAS F. WOOD, M. D., Wilmington, N. C.,	} Editors.
GEO. GILLET T THOMAS, M. D., " "	

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EDITORIAL CORRESPONDENCE.

THE ELEGANCE OF MODERN TRAVEL—THE AMERICAN PUBLIC HEALTH ASSOCIATION AT MILWAUKEE—DR. SMART ON THE PURITY OF WATER SUPPLY—DR. RAUCH AND DR. COCHRANE ON THE YELLOW FEVER—A GREAT ENGINEERING SCHEME ACCOMPLISHED: THE CREMATION OF GARBAGE.

MILWAUKEE, WISCONSIN, November 28, 1888.

Many a one has to endure more fatigue in a two days gunning around Wilmington than in riding a thousand miles in the palaces on wheels which stripe the maps all over the North and Northwest.

The pleasure of this travel has about it a fascination that allures one on and on, and, despite the fact that the places of interest are advertised and photographed, anticipating the traveller in some measure, the half is not told, nor can any photographs of places have inserted into their composition the life and bustle—ceaseless varieties of human unrest—which met us at every turn as we sped our way from Washington through Harrisburgh, Pittsburgh, Fort Wayne, Chicago and Milwaukee. Everywhere on the line we see colored servants, but once plunge into the thronging masses, and the colored friend and brother is no longer a feature of the population, and while one misses him, it is with a feeling of relief that at least there is one stream of life that is not rendered sluggish by the preponderance of black—shall we say venous—blood, the blood that in the Southern heart is a fuliginous thrombus, which, slowly melting, disseminates itself through the vital centres of the body, causing a lethargy which is too deep to enable its possessor to know of its existence.

But to return to the elegancies of travel, even at the risk of seeming to advertise the corporation, we commend the vestibule train which goes steaming out of Washington to Chicago every morning, making the run to the latter city in a little less than a day.

The Pullman cars are so elegant that, having seen one fine car, we conclude that now this is the perfect thing, and still we meet with surprises on this line that are constantly new. The interior adornments of wood-work and upholstery in tasteful, rich, but sober colors, with no dust to mar their freshness, the ornamental always taking a turn which means comfort as well as elegance. The traveller hears of the dining car, and until he enters it may fancy a snug seat at a table where he can eat enough food in quietness to satiate an appetite which travel and loss of sleep have augmented. But see the car and the outfit of bouquets, and spotless white linen, and elegant china and table-glass and cutlery, and then await the dainty spread of food served with quietness and style, and he has only to go back in his memory to the "good old days" when the Raleigh Railroad was laid with strap iron, when the tickets were signed with the pen of one man, when, over a "rat-a-tat rat-a-tat" of dusty ride, one sat down to abundant chicken, and biscuit, and hominy, and honey in the honey-comb at Teachy's, and all this elegance before him is a dream which makes the Arabian Nights'

entertainment a veracious history of the past. But what one of those matchless romances would contain the audacious picture of a whole saloon lighted by one motion of the hand—fifty brilliant loops of light. But what is all this preliminary to do with the American Public Health Association?—a good deal to the traveller, and no little to the writer, who is so overcome by the accessories that the play itself dwindles.

Notwithstanding the far-off corner of the Union in which the American Public Health Association met, there was a goodly concourse of representative men from a large majority of the States and many of the large cities, and the interest in old subjects was pursued with the ardor and enthusiasm of novelties. To the sanitarian there are but few fundamental principles, but these must be worked over with great pains, expressions must be sought for to clothe the principles deduced, so that the teaching may reach every day practice and be so clear that the masses must be made to stop and think.

Dr. Charles Smart's paper on the "Purity of Water Supply," which presented some observations and deductions which drew from members of the Association such deserved compliments as that it was the best paper ever read before that body. It will appear in full in the pages of the JOURNAL.

The discussion upon it by Dr. V. C. Vaughn and others went to confirm the fact that the biological examination of water was not to be relied upon alone in determining the purity of water. How far bacteria could be traced from the original source of pollution, Dr. V. C. Vaughn discovered in one examination their presence at a distance of fifty yards more bacteria than at forty yards from the supposed influx. Dr. T. J. Turner, of the Navy, found that there was sewage matter in the water in one case at a distance of one hundred and seventy miles from the influx. The decided weight of testimony was that the errors of bacteriological tests were so various that in our state of knowledge we must not rely upon them. Alas! that a theory which had so many possibilities should be shattered in so short a time; but better at this stage than after we had been led into fatal delusion.

Dr. J. H. Rauch's "Yellow Fever: Panics and Useless Quarantines; Its Limitation by Temperature," contained some wise observations upon the uselessness of some quarantines, but it also involved some other theories which possibly might do as much harm as useless

quarantines, viz: that at certain temperatures there is no danger of yellow fever spreading. This, in the face of the experience of the fever spreading in Chattanooga from cases carried from Brunswick, Ga., and the skipping of the fever from Jacksonville to Decatur, Alabama, must make us pause and consider if such generalizations are warranted by facts. Every resident of a Southern town where there has been a yellow fever epidemic, knows that there are some seasons when the dangers of spread of the disease by reason of humidity, heat and continued calm, are much greater than in other years when the winds are brisk and there is little humidity, although there may be heat of a severe degree. All the facts are not in, and Dr. Rauch's theories are not nearly so good as his practice, by the promptness, vigor and good sense of which he has engendered confidence in his sanitary work throughout the Mississippi Valley. His idea about the National Government taking charge of the quarantine is one which possesses also some of our brethren of Philadelphia, but we hope no such practice may be put in operation in our day.

The city engineer of Milwaukee made a verbal report of work done by him to relieve that city of the offensive condition of Milwaukee river, which, without current, had been for years a receptacle of the sewage of this great city. So great had the offense become that the waters of this river, lying within the densest part of the city, was black in color and emitted a horrible stench when the temperature rose to 70° and above. To correct it he devised the plan of bringing the water of Lake Michigan by a conduit of eight feet in diameter several hundred yards, and forcing it in immense volume into the river, creating an artificial current and clearing it of sewage sludge. The people had little confidence in his plan, but the very day the water was turned in from the lake the river commenced to be purified, and the change has been effectual and permanent. It is highly gratifying to hear a clear-headed engineer, or any other original man, as for that matter, demonstrate a practical reformation like this, and carry it through despite of opposition and distrust. This great city of 200,000 people was by one clear brain saved untold annoyance and possible pestilence.

Dr. Jerome Cochrane's account of the yellow fever and his observations upon the method of spread, etc., was decidedly the paper of the session. We were pleased to see his health so much

improved, and to hear a Southern man tell out of the richness of his experience the nature of the dread pestilence, and show how much reliance may be placed in means used. The paper was ordered to be printed for early distribution, so in like manner was that by Dr. Smart on water pollution.

The destruction of garbage by burning was a question of great importance discussed from several distinct stand-points. Several methods were shown practically—enough to demonstrate that the day is not far distant when the destruction of garbage economically can be effected. We hope to give more specific description at no distant day of several of these methods. We take pleasure in acknowledging the great kindness of Dr. DeWolf, the model health official of the great city of Chicago, for opportunities to examine the details of his office. The system there is so exact that, for instance, he can locate, without any effort, the presence of nuisances, determine at once the responsibility of the citizen or official, and apply the remedy at once for its removal. System, order, dispatch mark all the efforts of this great official, and we commend to any one desiring to learn the minutiae of sanitary details to visit Chicago and spend a few days in Dr. DeWolf's office. Not only the representatives of the North Carolina Board of Health, but those from many States were recipients of attentions at the hands of this officer. A large party was taken to the Chicago garbage crematory and shown its workings, and the beauties and wonderful business methods of Chicago were unfolded for our delectation, and on a subsequent day the famous abattoir of Armour was also visited. If this should meet the eye of Dr. DeWolf we trust he will accept it as a slight recognition of what we owe him, and assure him that we believe that his energy is so contagious that he imparted no little of it to his guests of the 19th and 20th November.

We had the pleasure of meeting Mr. Henry Lomb, of the firm of Bausch & Lomb, the renowned makers of microscopes. His great interest in promoting the welfare of the working classes, as evinced in the donation of handsome sums in prize money to the writers of the best essays on practical instructions for the preservation of health, healthy food and healthy homes for workingmen, show how benevolent he is, but no description with pen can portray how modest and unselfish he is. We hope he will be spared for many years to add his wise counsels to the American Public Health Association, and to carry on the benevolent designs which spring so bountifully from his warm heart.

REVIEWS AND BOOK NOTICES.

THE LIFE INSURANCE EXAMINER: A Practical Treatise upon Medical Examinations for Life Insurance. By Chas. F. Stillman, M.S., M.D., Medical Examiner for the Mutual Life Insurance Company of New York City. New York, 16 Dey St., 1888. [Price \$3.00.]

Nothing has brought some of the medical profession into as much disrepute as careless examinations for life insurance. In the South, especially, life insurance is the main stay of many a family, and in the reverse of fortune which has for a quarter of a century caused us to pass through untold poverty and complete social revolution, the incomes from this species of property has been about all the ready money available for the widows and orphans. While bogus companies, and illiberal companies, and dishonest companies have caused great losses and disappointments to those who supposed they were insured because they held a beautifully engraved policy, companies in their turn have been made to suffer losses of a serious character by careless and perfunctory examinations.

The proper examinations for applicants, therefore, is of vital importance to the insured and the insurer, and as any physician may be called upon to make examinations, he should not only know the general principles of diagnosis, but the special application of them to the estimation of a "risk." It is for the latter purpose that the book is written. It has a dissected figure of the human body, illustrating the landmarks for inspection of the organs to be examined.

Instructions are given relative to the formalities preliminary to medical examination, which is followed by the minutiae of such examination, such as identification, environment, physique and physical diagnosis.

The chapter relating to hereditary influences is a collection of well-expressed aphorisms, well calculated to assist the examiner whose knowledge of medicine has not been enriched by long experience and observation. The chapter on the examination of the urine is also very full, the illustrations of tube casts, deposits, etc., being reproductions of Beale's Microscope in Practical Medicine.

There is one other thing which such manuals cannot settle for

companies, viz : who are competent examiners; but in this State the basis of the medical referee of many companies is, that preference is always given to members of the Medical Society of the State, the requisites of such membership including the test qualification of the possession of a license from the Board of Medical Examiners.

This book will be a proper manual for the Mutual Life of New York, the *Ætna* Life of Hartford, and other first-class companies to present to their medical examiners.

PUBLIC HEALTH PAPERS AND REPORTS (Vol. xiii) Presented at the Fifteenth Annual Meeting of the American Public Health Association, 1887. Concord, N. H. : Republican Press Association, 1888.

No one interested in practical sanitary questions can afford to be without the volumes of this Association, nor can they afford to neglect the study of them. All the questions involving the public health are here considered by practical sanitarians and statisticians, and these volumes are the source of instruction for executive officers of Boards of Health, as well as for corporations and individuals.

Dr. George M. Sternberg, the distinguished microscopist and bacteriologist and sanitarian, presided, and his address was worthy of his reputation and position. He reviewed the epoch during which sanitary science has grown and boards of health have sprung into existence and started on a career of development, going back to the historical meeting of the American Public Health Association, in Richmond, in 1879, (?) at which time the physicians of the South, prominent among whom was the lamented Dr. Bemiss, brought to the view of hundreds of interested sanitarians, by means of elaborate diagrams, the havoc which the yellow fever epidemic had wrought in the Valley of the Mississippi. His allusion to Dr. Bemiss' services and to his genial manner and delivery are truthful and touching. From this meeting Dr. Sternberg dates the impulse which led to the sanitary reconstruction of the city of Memphis. His discussion of the possibility of preventing the ingress of pestilential diseases into cities is well fortified with the actual experiments which have been performed in this direction, and are upon the whole encouraging as to their final success, especially as regards cholera.

Dr. Sternberg's reference to the distinguished part which he has

taken in the bacteriology of yellow fever, cholera and typhoid fever is modest, and breathes the true spirit of a scientific investigator, the spirit which has borne such excellent fruit in these later days, so that his reports and negative opinions in his later observations as to the alleged discovery of Freire as to the discovery of the yellow fever bacillus is received with a degree of confidence that perhaps not another investigator in the country would have accorded to him.

Dr. Ezra M. Hunt, of Trenton, N. J., the distinguished Secretary of the Board of Health of his State, presented a paper on "*The Prevention of Mycophytic Diseases by Individual Prophylaxis*," and also another, "*The Origin of Some Diseases*." These papers provoked a lengthy discussion, which was participated in by many members, indicating that they were the "field papers" of the session.

We infer that Dr. Hunt did not desire to commit himself to the *de novo* origin of some diseases. But we will not attempt to outline the discussion, but commend it to the reader as an elaborate expression of opinion upon a practical subject which shows at a glance the complexion of the thoughts and works of the leading sanitarians in America.

The "*Report of the Committee on Disinfectants*," covering 136 pages of this volume, we noticed in a late number of the *Journal*, and we are pleased to know that an interest has been excited thereby among our readers; we take occasion again to ask their perusal of this important contribution to science.

The dry subject of the registration of vital statistics presented by Dr. Billings, shows some practical points in the registration by means of a machine. The cost of this machine we see stated at \$3,500, just \$1,500 more than the annual appropriation to our State Board of Health, holding out no prospect for its adoption by us in the near future.

"*The Malarial Germ of Laveran*" is the subject of a contribution by Dr. W. T. Councilman—a most interesting subject, succinctly treated.

"*The Destruction of Garbage*," by Dr. L. Laberge, of Montreal, describes the crematory for the destruction of his garbage, which is used in his city. It is illustrated with a diagram of the furnace, but unfortunately he was not able to give the figures as to cost of operation.

The other copies, which we have room only to give by title, are: "Cholera and Quarantine," by John H. Rauch, M.D.; "Report of Committee on Pollution of Water-Supply"; "Water Pollution in Massachusetts," by S. W. Abbott, M.D.; "River Pollution in Connecticut," by Prof. S. W. Williston, M.D.; "Notes on the Pollution of Streams," by Rudolph Hering, C. E.; "House Drainage," by Dr. L. A. Falligant.

The working equipment of every office of a sanitarian must include the thirteen volumes of the American Public Health Association to be complete, and fortunate is the owner of a full set.

THE PATHOLOGY, DIAGNOSIS AND TREATMENT OF DISEASES OF WOMEN. By Graily Hewitt, M.D., F.R.C.P. Edited with Notes and Additions by H. Marion-Sims, M.D. In Three Volumes. New York: E. B. Treat, 771 Broadway, 1888. [Price \$2.75 a volume.]

The previous editions of this volume have been in eclipse owing to the predominance of the brilliant school of surgical gynecology in our own country and Germany, and now comes to us in a fourth edition with all the additions necessary to make it a pretty fair exposition of the status of this thoroughly worked (over-worked?) division of medicine.

Dr. Harry Marion-Sims was entrusted by the author with the editorial revision of it, and in every direction we turn we note what enrichments of its pages come from the stores of practical work of the elder Sims. Because the author has, after ten years, thoroughly revised and rewritten his work, and there has been transfused into its thoroughly conservative pages the outgrowths of the remarkable decade just passed, he has reinstated his work into an advanced position among the first—very much to say when our libraries are rich in volumes from the pens of distinguished men of all countries.

Dr. Sims says of the merits of Hewitt on Women: "It insists on better nutrition. It advocates the mechanical pathology of some forms of uterine disease, viz: that pathological changes are produced by mechanical causes. The wood-cut illustrations of uterine displacements are of life-size, which is an aid to the beginner. We have long known that the nausea of pregnancy is a neurosis, a reflex symptom which the author shows very conclusively to be the result of some form of uterine distortion, and which is always relieved by

appropriate mechanical treatment. He further demonstrates most satisfactorily that hysteria, in all its protean forms, is a uterine reflex symptom, dependent always on flexion or malposition, and that to remedy the latter is to cure the former." We do not think that the editor will have it all his own way in the latter opinion, but his estimate of the work is worth recording.

Treat's Medical Classics, of which these volumes are parts, have been strengthened by the addition of them, and their convenient size for ready reference will make them popular.

PHOTOGRAPHIC ILLUSTRATIONS OF SKIN DISEASES: An Atlas and Text-Book Combined. By George Henry Fox, A.M., M.D. Hand-Colored Plates; Nearly One Hundred Cases from Life. New York: E. R. Treat, 771 Broadway.

We are in receipt of Parts 7 and 8 of this choice work, for which we have many times before expressed our preference.

The illustration of Pemphigus on the back of the hand in Part 7, showing the clear blebs and one ruptured and shriveled with a forming crust in its bed, is the first in this part, and could be easily submitted as a typical picture of the disease, and these are followed by examples of acne, porrigo and purpura, which are hardly of inferior value as typical specimens.

The "Ichthyosis," "Rosacea," &c., of Part 8, fully sustain the character of the work. It seems, looking at these portraits, that the physiognomies of the possessors of the diseases is a necessary complement of the actual lesions, giving us, as we glance, a whole hospital history as to age, nativity, occupation, etc., etc.

Surely Americans have now great riches in the pictorial works which are issuing from the press on dermatology, giving their authors equal position in the science with the masters on the eastern side of the Atlantic, and none are more acceptable, and none bear as close scrutiny as the work before us. The work is sold at \$2.00 a part and will be complete in 12 parts.

PRACTICAL ELECTRO-THERAPEUTICS. By William F. Hutchinson, M.D. Philadelphia: Records, McMullen & Co., 1888. Pp. 247.

As usual in such manuals, this work is written for the country doctor (*alias* general practitioner), and is simplified to suit all, especially those who have not paid much attention to such therapeutic

means. The first chapter describes the outfit in simplest terms; then the certainty of differential diagnosis by means of electricity; then general faradization, and central, direct or indirect faradization; then the technique of galvanism. He then shows the practical application of the agent to disorders of the special sense: dyspepsia; neurasthenia; neuralgias; diseases of childhood; diseases of the bladder and prostatic enlargement; electricity as a sedative; diseases of the skin; hysteria and its allies; illustrative cases of rheumatism; paralysis. Under the heading electrolysis are treated urethral and uterine electrolysis, concluding with electro-surgery. If a compact, cheap, practical manual is wanted, this book is about as good as one can get.

PHYSICIAN'S INTERPRETER. In Four Languages. Specially Arranged for Diagnosis by M. von V. F. A. Davis, 1231 Filbert St., Philadelphia, Pa., 1888.

Nice little book, in Russia leather, for side-pocket, clear in print, convenient in every way, giving some questions for the non-polyglot doctor, telling him what to say to his foreign patient, be he French, German or Italian, but not Spanish. The youngster at our side who is just getting into the mystery *Ich habe, du hast, er hat*, enquires of his elder how we are going to find out what the patient says back to us, and we give it up. There are interleaved blank pages for memoranda, and many may find it useful as a remembrancer for long-forgotten words. We will send it to any subscriber who can make good use of it, provided he is not in arrears to the JOURNAL.

MANUAL OF DIETETICS FOR PHYSICIANS, MOTHERS AND NURSES.

By W. B. Pritchard, M.D. Dietetic Publishing Company, 115 Fulton St., New York.

This is a short essay on feeding, quite well adapted to nurses and mothers who lack instruction. The multiplication of books and booklets on the subject of baby food is endless. The advent of every new and "perfect" food makes it necessary to write a new essay on the principles of nutrition it covers, and so our shelves are burdened with such literature. The author is not an immoderate champion for his favorite food for babies, and the Dietetic Publishing Company could not have had their interests more discreetly set forth. The motive of such contributions is judged by the business interests it is supposed to represent, and however faithfully the literary part may be done, its rank is determined by the motive.

CORRESPONDENCE IN REGARD TO YELLOW FEVER REFUGEES.

ANGELINE, Henderson County, N. C., Nov. 19, 1888.

Messrs. Editors North Carolina Medical Journal:

There has been a great deal of comment through the newspapers and medical journals of the country in regard to the admission of the yellow fever refugees into the town of Hendersonville.

In my letter of September 22 to the State Superintendent of the Board of Health, I should have said there were some few of our people dissatisfied as to their coming. As to my personal knowledge, I never heard a single objection only from rumor. The JOURNAL also stated that there were not proper preparations and that there was great confusion. On the arrival of the train there was a special committee to see after them, and they were all housed in one hour. The sick were taken to the Hospital and expressed themselves as being treated with marked kindness.

The JOURNAL goes too far when it says it was covetousness on the part of the few. At a joint meeting of the Medical Board and Town Council, after consulting some of the best medical text-books, found that it was impossible for the yellow fever germ to exist in an altitude as high as ours with a low temperature. The matter was entirely left with me, and I deemed it prudent to admit them. There were a few poor people among them, but the majority were men of wealth and culture.

The experiment has now been tried, and why should not the Government, with her millions, establish a Government camp here and keep a strict watch over them and relieve the thousands of suffering humanity in the pent-up cities and districts of our sister States.

Respectfully,
L. L. JOHNSON,
Supt. B'd of Health for Henderson Co.

DR. JOSEPH O'DWYER, the originator of Intubation of the Larynx, has been appointed Professor of Diseases of Children in the New York Post-Graduate Medical School and Hospital.

PURIFIED WATER.—The boiling of water “to kill the microbes” has sometimes been recommended by physicians. M. Tellier has shown that this cannot be effected by a temperature of 212° F. He also observed that boiled water being deprived of its air, is heavy and indigestible, and that through loss of the calcareous salts it becomes insipid, and is disagreeable to drink. He prepares water in a closed vessel, placed in a salt and water bath, by which he gets a temperature of 300° F. In using, the water is drawn from a filter-faucet placed near the bottom of the vessel. A small faucet at the top, to admit the air, is kept covered with cotton.—*Arch. de Phar.*

READING NOTICES.

DR. R. J. REDDEN, Canster, Ala., writes: “I used the sample of Lactated Food in a case of typhoid fever, in a little girl ten years old, and was much pleased with it.”

MESSRS. ELI LILLY & Company, of Indianapolis, have issued a work entitled HAND-BOOK OF PHARMACY AND THERAPEUTICS. The aim, as stated in the introduction, is to furnish the busy practitioner a reliable means of ready reference, at once concise, systematic and authoritative, to which he may refer with confidence in cases of doubt. Younger members of the profession and medical students will find this little work full of suggestions. It will be sent free to any physician, druggist or medical student by addressing Eli Lilly & Co., Indianapolis, Ind., mentioning this Journal.

